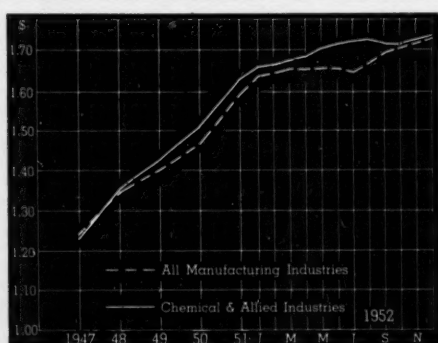


Chemical Week

April 18, 1953

Price 35 cents



► **Chemical wages hold lead over all-manufacturing; buying power rises 15% in 4 years p. 20**

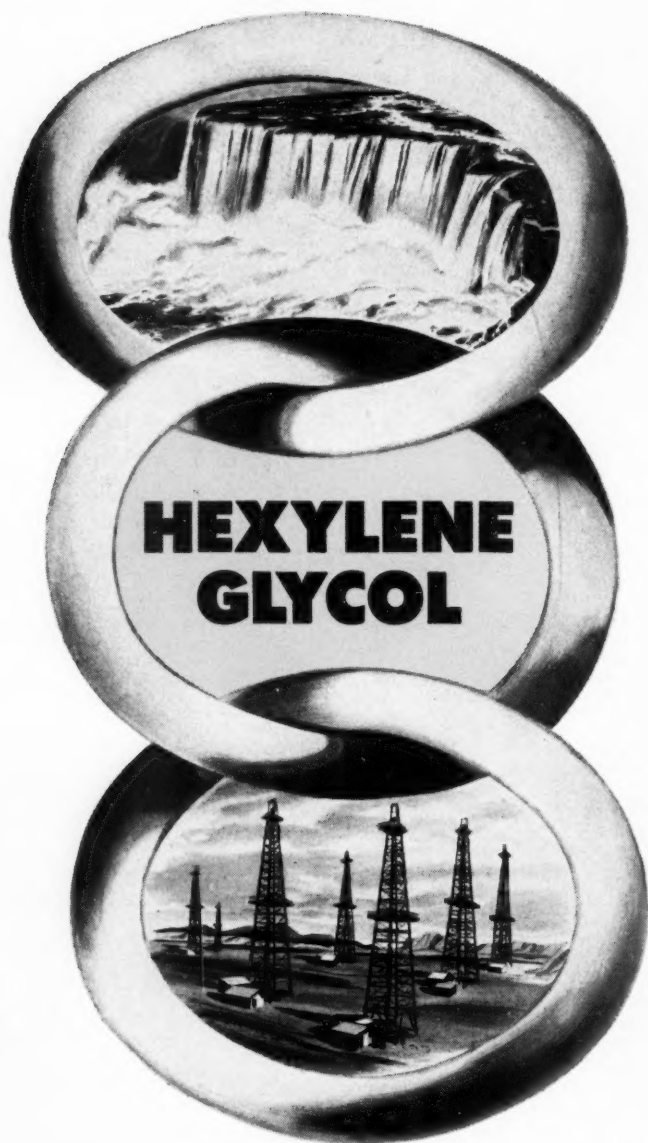
New research center focuses on farm animals, seeks to fatten, cure them with drugs . . . p. 36

► **CW Camera sees world's largest limestone quarry aim at peak output for chemical users . p. 51**

► **Bradley & Baker's Baker: His niche is finding farm outlets for processors' wastes p. 60**

Tidy paint market opens up as Navy prepares to halt its own manufacturing p. 70

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Chemical Week

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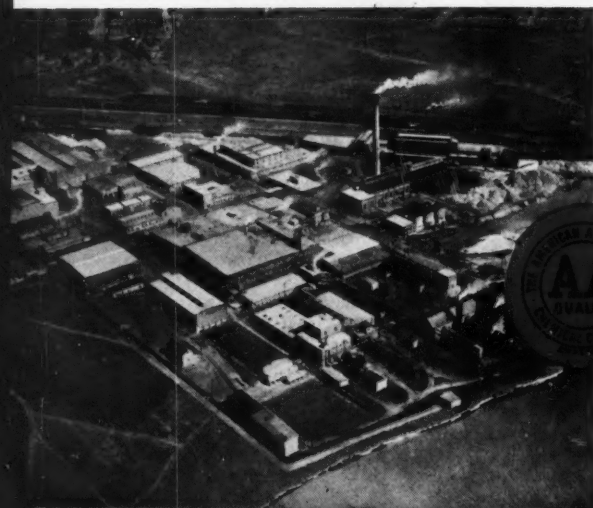
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OPINION....

Doesn't Dissolve Cartels

TO THE EDITOR: It appears to me that a certain government agency should look into the "antitrust" formula developed by Mr. Seuffert (*Mar. 28, p. 30*).

MARTIN H. GURLEY JR.
Manager
Technical Department
The Duplan Corp.
Kingston, Pa.

Score one for sharp-eyed Reader Gurley. The editor of our "Legal" section, in which the item in question on the "antitrust" formula appeared, also concerns himself with Department of Justice activities. We think that explains it.—Ed.

Tariff is Dynamite

TO THE EDITOR: . . . I heartily agree with what Mr. Dehls (*Mar. 14*) has to say, although there are still other sides to the tariff question. We all like to make things simple and easy to explain, but the tariff question cannot be disposed of so easily. Our British friends say the answer is "Trade, Not Aid." Mr. Ford says the answer is free trade. The chances are that no two men in industry would completely agree on an answer, so I do not hope to be able to speak for more than myself.

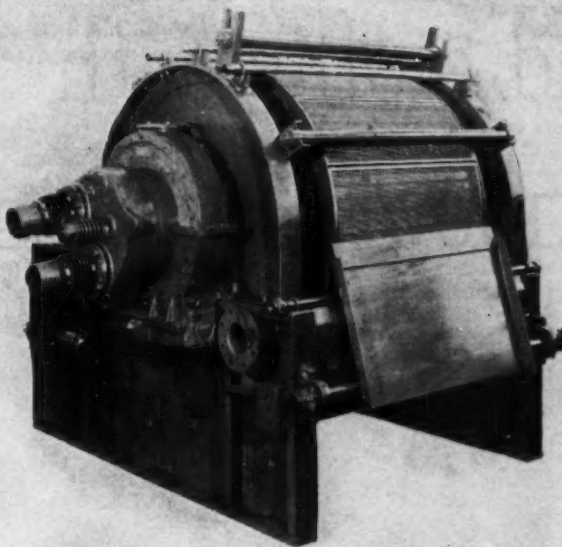
In my opinion tariff tinkering is about on a par with letting the baby play with dynamite caps. Just because they might explode and kill the child is scarcely a good reason for banning their manufacture and sale. Dynamite caps are an essential part of our civilization, and review of our tariff laws by competent and informed experts is important to our progress. Mass hysteria, however, has no place in the handling of either.

The tariff laws have a number of objectives aside from the revenue-producing one. To my mind the most important one is to preserve within the United States industries that produce items essential to the national defense. Have we forgotten in ten short years how war cut off supplies that had to reach us by water? It would seem so when we permit the

CW welcomes expressions of opinion from readers. The only requirements: that they be pertinent, as brief as possible.

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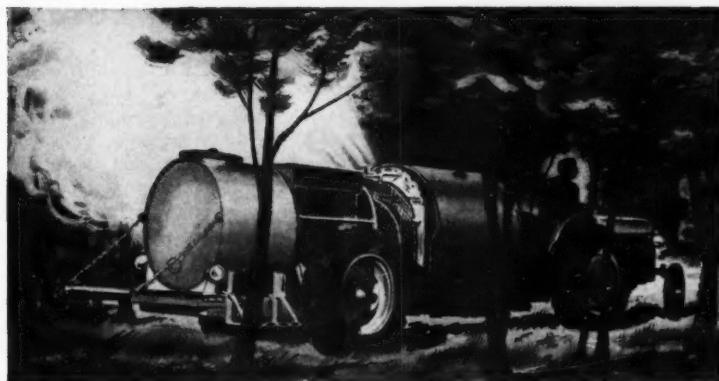
Fresh and fragrant, the sun-tan lotion in this bottle is just what this lovely girl expects . . . and demands! But it takes a good deal of work to make sure that no matter how long a product like this stays in stock or in a warehouse it's still fresh when it gets to the consumer. When you formulate cosmetics with Armour oleic acids, we do the work of guaranteeing that vital freshness.

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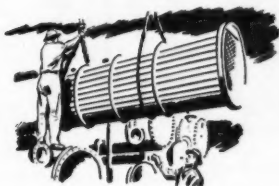
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for the almost complete absence of corrosion or corrosion products.

Needless to say, this plant is now using Armeen C extensively for this and other processes. An interesting sidelight is the fact that since the introduction of Armeen C the throughput of the plant has increased 20%—a big factor in reducing production costs.

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Neo-Fat® 280—a new low-cost vinyl chloride stabilizer

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Neo-Fat 280—a new, low-cost fractionally distilled fatty acid—is outstanding for this application. Its soaps are compatible with vinyl plastics and so do not contribute to cloudy films. Stabilizers based on Neo-Fat 280 are extremely resistant to water leaching in vinyl films. Finally, the high acid value, low moisture and low unsaponifiable content of this fatty acid insure a maximum of metal per pound of stabilizer.

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OPINION

practical destruction of our watch industry and our scientific instrument industry. We really have moved our frontiers into Europe!

Whenever we consider a product whose manufacture involves a large amount of labor, we at once find American industry at a heavy disadvantage compared with Europe, where wage rates are often as little as 20 to 30 percent of our rates. In this country we adopted the Walsh-Healey Act to insure that one part of our country does not take an unfair advantage of another because of labor rates. Since we do not have any way of enforcing the Walsh-Healey Act abroad, we have tried—at times—to protect American industry by tariff laws.

On the average, duties assessed on imports into the United States are lower than for almost any other country on the globe. It is therefore only a pious hope that expects elimination of tariffs to close the dollar gap between our imports and exports. I think it would surprise any American businessman, however, if he took a careful look at the store windows abroad and searched for bargains—bargains that can be brought in and sold or converted here—after paying the tariff. The trouble is that we do not know what is available, nor how it can be used, because we do not go to Europe to find out, while the Europeans go to Washington, or set up a New York agent who is not aware what his European employer really has on the shelf. Our best chance of closing that dollar gap is to facilitate direct contact between American and European businessmen.

CARY R. WAGNER
Utica, O.

Concern with Safety

TO THE EDITOR: Your news story "Quest for Glory" (Feb. 28) . . . gave a very objective report on unions and their means and programs for the safety of their membership as employees of the chemical industry.

I must confess I was quite shocked by the report of the remarks of an official of the O.W.I.U.-C.I.O. in regard to . . . safety, and Oil Workers' provisions as applied to the contracts in effect in the oil industry.

As president of Oil Workers Union, Local 513, Whiting, Ind., which represents three different chemical plants in the area, I am quite aware of the importance of the workers' safety. We have written into our contracts some very effective clauses for the benefit of our membership, for instance:

"Clause No. 1. The Union and the Company agree to form a joint safety committee which shall be known as the Safety Advisory Committee consisting of six (6) members—three to be appointed by the Union and three to be appointed by the Company. Meetings to be held monthly.

"Clause No. 2. The company shall make all reasonable provisions for the safety and health of the employees. When in the opinion of an employee reasonable precaution from injury is not provided, this shall be considered a legitimate subject for grievance. A condition endangering safety shall be the subject of an immediate conference between the proper representatives of Union and Management.

"Clause No. 3. The company, recognizing that the protection of life and limb is more important than property protection, agrees that an employee's reasonable failure or refusal to perform work unreasonably endangering his safety shall not warrant discharge."

I hope this information will allay any doubt in the minds of your readers, of whom I am one, that the Oil Workers Union is cognizant of the importance of safety to its membership. I might add we also know that clauses alone do not insure the workers against everyday hazards. It takes a lot of diligent human endeavor to carry out the meaning of the word "safety."

MARSHALL E. ELMORE
President
Local 513
O.W.I.U.-C.I.O.
Whiting, Ind.

"Head-in-the-Sand"

TO THE EDITOR: In your otherwise excellent magazine I think I detect a strong bias toward the Eisenhower administration. It isn't blatant, but it's implicit in such articles as "End of Pump-priming" and "GOP Gets Oriented" . . . (April 4).

It is difficult for me to see how a magazine supposedly serving the interests of the business community can adopt such a reactionary, head-in-the-sand attitude toward the previous administrations, which over 20 years dragged businessmen, kicking and screaming, to unparalleled heights of prosperity. Sure, taxes are high—but so are profits, the employment level, the workers' standard of living. Where would many small businesses be without RFC, and without the Justice Dept.'s Antitrust Division? What kind of a market for fertilizers could farmers provide without crop support programs? How could the South contrib-



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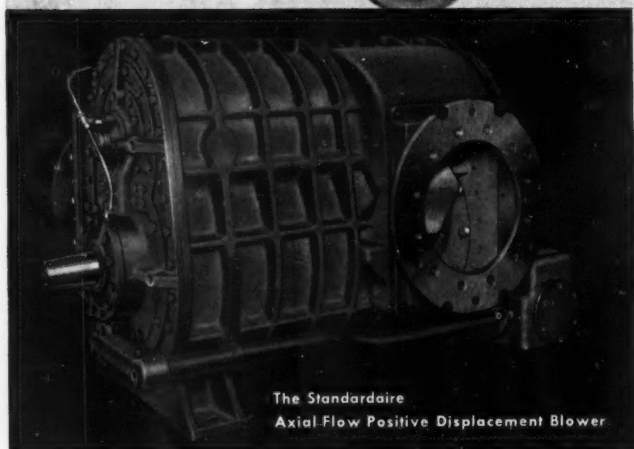


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OPINION

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L. J. ANDERSON
Chicago, Ill.

As long as our liberal readers call us reactionary—and vice versa, we're sure we're steering a straight-down-the-middle course.—Ed.

Addenda to the Lists

TO THE EDITOR: I was very interested in reading your news story "All Are Important" (Mar. 28).

I would like to call your attention to the fact that under the vinyl group there should also have been listed our Exon. . . .

THOMAS A. HENRY
Sales Promotion Manager
Firestone Plastics Co.
Pottstown, Pa.

TO THE EDITOR: . . . We noted in your article on laboratory reagent chemicals (Mar. 21) that the list of suppliers of reagent chemicals does not include our name.

As we are one of the major suppliers in this country of organic laboratory reagent and research chemicals, indicators and amino acids, we believe that we should have been included in your list.

P. P. CORRITORI
President
Eastern Chemical Corp.
Newark, N. J.

DATES AHEAD . . .

Southern Industrial Wastes Conference, Hotel Roosevelt, New Orleans, La., Apr. 19.

Amer. Inst. of Chem. Engrs., joint conference with Chem. Inst. of Canada, Toronto, Can., Apr. 26-29.

Flavoring Extract Mfrs. Assn., convention, Atlantic City, N.J., May 10-13.

Chlorine Inst., spring meeting, Seaview Country Club, Absecon, N.J., May 11-12.

Society of Cosmetic Chemists, spring meeting, Hotel Biltmore, New York, N.Y., May 15.

Air Pollution Control Assn., annual meeting, Lord Baltimore Hotel, Baltimore, Md., May 25-28.

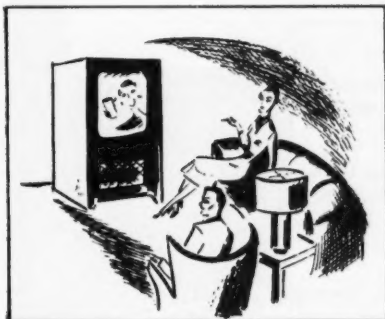
Amer. Society for Engineering Education, annual convention, Univ. of Florida, Gainesville, Fla., June 22-26.



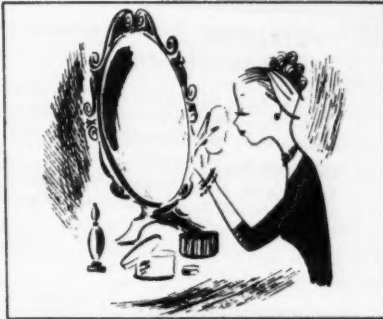
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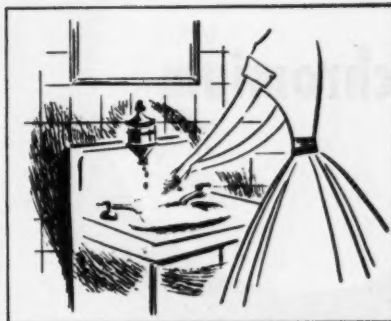
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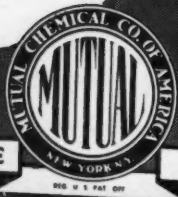
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USES — Chrome tanning, dry color manufacture, textile dyeing, chemical oxidation, cleaning brass, copper, zinc, tin and other metals, corrosion inhibition, wood preservation.

SHIPPING CONTAINERS
Bags, 100 lb. net • Steel drums, 100 lb. net • Fibre drums,
400 lb. net • 70% solution in tank cars

**SODIUM
CHROMATE** Na_2CrO_4

USES — Proprietary dry chemical mixtures, corrosion inhibition, wood preservation.

SHIPPING CONTAINERS
Steel drums, 100 lb. net • Fibre or steel drums, 400 lb. net

**POTASSIUM
BICHROMATE** $\text{K}_2\text{Cr}_2\text{O}_7$

USES — Same as Sodium Bichromate; production of pigments, matches, green glass and vitreous enamels; photography and blueprinting; for dyeing.

SHIPPING CONTAINERS
Bags, 100 lb. net (granular only) • Steel drums, 100 lb. net • Fibre, 400 lb. net • (Available in granular or powdered form)

**AMMONIUM
BICHROMATE**
 $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$

USES — Photographic reproduction such as in photoengraving, pyrotechnics, catalyst manufacture, porcelain colors.

SHIPPING CONTAINERS
Fibre drums, 100 lb. net • Barrels, about 350 lb.

CHROMIC ACID
 CrO_3

USES — Chromium plating, anodizing aluminum, chemical treatment of magnesium and aluminum alloys, inhibitive dips for metal prior to painting, manufacture of drugs, chemicals and catalysts.

SHIPPING CONTAINERS
Steel drums, 100 lb. net • Steel drums, 400 lb. net

NEWSLETTER

Research laboratories of two firms are readying new products for early introduction:

American Potash & Chemical Corp. (Los Angeles) has been quietly making developmental lots of elemental boron for some time, will soon introduce a series of new boron compounds: boron acetate and a number of borates—tri-n-butyl, tricyclohexyl, tri-n-dodecyl, tri(methyl-amy), tri(tetrahydrofurfuryl), tri(2-ethylhexyl), tricresyl and tri(tetradecyl). Samples of these are available, and the firm promises other new chemicals soon.

And a Midwestern fats and oil firm is expanding in the plasticizer field, will bring out the first of a series early next month. The initial offering will be for vinyls.

You can also expect to hear more about a new \$0.5 million lithium chemicals plant that Nicholls Chemical plans to build at Canon City, Colo. Major products will be lithium oxide and hydroxide, but some carbonate and chloride will also be produced. Raw material for the process is lepidolite, a lithium mica. Initial operation—at the rate of 50,000 lbs./month of lithium hydroxide equivalent—is scheduled for next fall. Rust Process Design is engineering the plant.

Principal market for the output will be oil companies, which will use it in making lithium greases. The firm later plans to produce other rare alkalis, eventually develop all the rare metals in the area.

The firm is related to Nicholls Mineral Co. (Cincinnati), a minority stockholder in Carborundum Metals Corp., for which Rust is designing a zirconium plant (CW, Jan. 10).

Too much "chemical counterfeiting," say Monsanto and Abbott Laboratories. Both firms have recently filed civil suits in U. S. District Court, New York, asking for injunctions against alleged product pirating, plus triple damages and costs.

Monsanto says in its complaint that the Thoet Corp., New York, has been selling saccharin in packages bearing all four of Monsanto's registered trade marks—the word "Monsanto," a circular shield including the words "In Bello Quies" ("calm in battle"), an oval seal containing the word "Monsanto," and the title "Saccharin Monsanto."

Abbott's complaint asserts that the Park Pharmacy of The Bronx, New York, has been selling its own pentobarbital capsules on physicians' prescriptions calling for "Nembutal," the sodium pentobarbital preparation that Abbott has been selling since that tradename was registered in 1931. Abbott says the pharmacy's capsules are "imitations" of Nembutal in size, shape, color.

The defendants decline to comment just now, say their lawyers will do the talking in court.

First indication of the attitude being taken by the Justice Dept.'s Antitrust Div. now that it's under new management (see p. 22): it will be less "vindictive" toward business. Attorney-General Herbert Brownell,

Jr., hints that he'll move for dismissal of the criminal action filed last August against four major oil companies, and also that he'll ask the U. S. District Court in Washington to permit a "cease firing" order for the grand jury that has been probing FTC charges of a world-wide oil cartel. Brownell says that by April 28, his lieutenants will start a civil suit that will cover the same ground and will have as its objective not to mete out punishment and penalties, but only to correct any illegal situation that may be found.

One point to remember: antitrusters rarely win criminal suits, but the grand jury proceedings unearth information that government lawyers couldn't get otherwise—and they can use it in prosecuting the civil suit. Besides, a civil suit can be put in the freezer—filed, but not necessarily prosecuted. Thus the current maneuver gets the Justice Dept. off the Truman-cast hook.

But while the U. S. oil companies have been vehement in proclaiming their innocence of cartel operations, five of the larger rubber companies in Canada are peacefully pleading guilty to a somewhat similar charge—forming a price-fixing combine in restraint of trade. Their industry organization at first denied the charge (CW, June 14, '52), and the companies still maintain that they were only trying "to make better products available at lower prices." But they decided it was "impractical to contest the charges" after the government introduced as evidence a letter written by a company official in 1947 (when the investigation started) suggesting that the companies burn records of their price-setting meetings.

Moreover, four of the five defendants submitted identical, higher bids to the city of Toronto for some fire-fighting equipment than a fifth bidder, a U.S. concern, claimed the Crown counsel.

Remindful of the Salem (Ore.) alumina plant sale (CW Newsletter, Apr. 4) is the Alberta government's decision to sell by auction the plant it built at Bitumont for experiments on extraction of oil from Athabaska tar sands. Built to find an economical method of recovering oil from deposits 280 miles northeast of Edmonton, the plant has "served its purpose," said a government official; but he neglected to tell the legislature whether it had been successful in its objective.

A year ago (CW, Feb. 2, '52) it was brush rayon sweaters; now it's toxic paint on toys and flammable children's clothing that have safety officials alarmed. The American Standards Assn. will set up safety standards for these categories of articles.

Most toy manufacturers use nontoxic paints, but the New York City Health Dept. has reported several illnesses and deaths of children who had chewed painted toys. The ASA group will determine which paint ingredients present a toxicity hazard.

Firms building in Louisiana got a break last week when the state legislature okayed a 10-year tax exemption for \$50 millions' worth of new industrial projects. Among them: Mathieson Chemical's \$2.8-million hydrazine plant at Lake Charles, Kaiser's \$25.7-million aluminum plant near Baton Rouge.

You never know where you'll find a market: the City of Los Angeles is now testing fireproofing compounds; mischievous moppets have been setting fire to straw-stuffed archery targets on city playgrounds.

. . . The Editors



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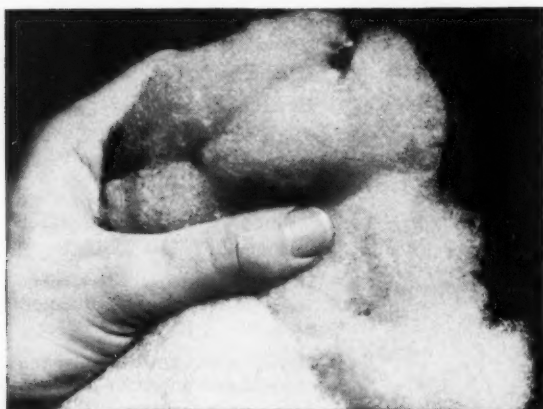


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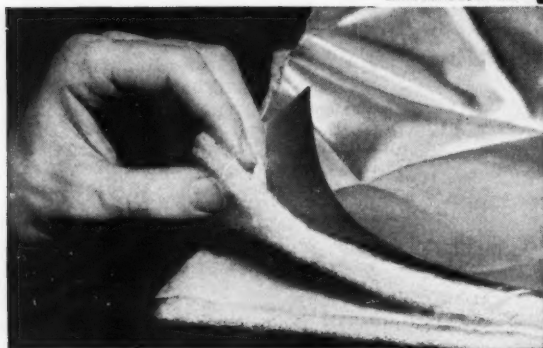
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tamination boots, dust-proof helmets, a method for printing on rubber, foam pads for truck seats and a host of other products used in industry and the home. Perhaps an American Anode latex, resin paste or other material can point the way to the development of a saleable idea or the improvement of a product for you. We'll help with technical advice. Please write Dept. AA-4, American Anode, 60 Cherry Street, Akron, Ohio.

*Trade Mark

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Chemical Week

BUSINESS & INDUSTRY.....

When Luther Draffen isn't selling a suit in his general store, he's selling Calvert City, Kentucky, to industry. Thirty years' effort brought hydroelectric power that has given rise to . . .



...a New Chemical Hub

No man to miss a good sales opportunity, Luther Draffen will probably shun his store this Saturday for better prospects at the Pennsalt, Goodrich and Air Reduction plants. There industry leaders and civic officials will be inspecting the new \$25 million-plus facilities in a tri-plant dedication. And Luther, an old hand at mixing with captains of industry and poli-

ticians as well as the boys around the store, can do his Western Kentucky boosting where it will do the most good.

The job's a lot easier now than it was back in 1927 when the Draffen brothers (Luther and Art) began their campaign in the state capital and in Washington to get electric power for Calvert City. Then the area, located

on the Tennessee River some 25 miles east of where it pours into the Ohio, was a declining agricultural section.

Power has been the catalyst in transforming it into the booming chemical center it is today.

Fight for Power: Through the efforts of the Draffens and their friends, the Tennessee Valley Authority in 1937 was persuaded to locate one of its biggest dams—the 160,000 kw. Kentucky Dam—near Calvert City. This was finished in 1944, too late for war industry to tap its power.

But it's being tapped today. And the need for more power beyond even Luther Draffen's vision now exists because of the Atomic Energy Commission's U-235 plant being built near Paducah, 30 miles away. When capacity (including TVA's Shawnee plant near Paducah and Electric Energy's plant across the Ohio at Joppa, Ill.) to meet the new demand is installed, the Paducah area, with some 3 million kw., will be one of the country's greatest power centers.

Power was not the whole story in the choice of Calvert City as a site by the three chemical companies, which, with ferro-alloys maker Pittsburgh Metallurgical, comprise the present industrial community. Raw materials like fluorspar, limestone and coke are nearby, and there is rail

(Illinois Central) as well as water transportation.

Moreover, those interested in the area enabled companies to line up industrial sites to prevent speculators from robbing them later on choice acreage. And now there are basic chemicals—principally acetylene, chlorine, caustic, hydrofluoric acid—which make the area more attractive to other expansion-planning chemicals manufacturers.

Started with HF: Both the availability of power and its large fluorspar deposits in Western Kentucky were behind Pennsalt's decision to put up a \$2-million hydrofluoric acid plant in 1948. Next, Air Reduction, eager both to utilize TVA power and to diversify further into chemicals, ticketed a \$10-million calcium carbide and acetylene plant there for its National Carbide Div. This was in 1951.

At the same time, Pennsalt decided to put an \$8-million chlorine plant on its Calvert City property. Chlorine and acetylene now promised, B. F. Goodrich moved into the picture, spent \$5 million on a vinyl chloride monomer plant. And, its initial plant just completed in late 1952, Air Reduction increased its stake in the area by another \$8 million to double its calcium carbide furnace capacity.

Though it has fluorspar deposits in the state, Pennsalt is conserving them for future use, is basing its present hydrofluoric operations on waste tailings from old Kentucky mines. The sulfuric acid needed in the process is made on the site, the sulfuric plant operating on sulfur barged from Louisiana.

The new chlorine plant, using the DeNora mercury amalgam cell, is so designed that its 55 ton/day capacity can be doubled or tripled without disrupting production. Although increased capacity is a future prospect, Pennsalt is first eyeing captive uses in organic chemicals for some of the output of the present unit.

New Trick or Two: National Carbide's plant boasts some innovations, too. In fact, the company thinks the continuous process for calcium carbide and acetylene it employs at Calvert City will keep its acetylene in the running with the low-cost petrochemical material.

The 200 ton/day electric arc furnaces are the first of the great, round, closed-top type developed by the Norwegian Electro-Kemisk to make their appearance in this country. They're also the largest the company has ever operated. Moreover, the electrodes are of the continuous-feed Soderberg type.

Limestone and coke are brought in by freight from Missouri, Illinois and other areas, and are charged into the furnaces (now two, but to be four by Mar. '54). These furnaces rotate slowly, tapping molten calcium carbide into a continuous-belt ingot conveyor. The carbide slowly cools as it goes to the top of the plant, is dumped and crushed for transfer to the acetylene generators. Though the process is streamlined now, Air Reduction is still experimenting with further improvements.

The Goodrich plant is, of course, an offspring of the other two. It is a pipeline customer for both Air Reduction's acetylene and Pennsalt's anhydrous hydrogen chloride, reacting the two with some additional hydrogen and chlorine to make vinyl chloride monomer. The monomer, the plant's only end product, is shipped by tank car to the company's plant in Louisville, Ky., Avon Lake, O., and elsewhere for polymerization into PVC plastic materials.

Customer Insurance: Goodrich is expected to be only the first of companies to feed off Air Reduction's acetylene and Pennsalt's chlorine (or its hydrofluoric). Several chemical companies are known to have more than a casual interest in the area, and it should be only a matter of time before they make up their corporate minds.

Air Reduction has indicated its confidence in affirmative decisions not only by its increase in capacity, but by its purchase of 1,300 acres around its plant at the very start of the Calvert City program. This land was divided into 15 industrial sites reserved for sale to future "satellite plants" based on its acetylene. Goodrich was the first taker.

Among stars Air Reduction sees in the Calvert City firmament: acrylonitrile for synthetic fibers, trichlorethylene.

Living Together: In the transformation from a village of a little over 300 to a town of 1,000, Calvert City suffered the usual growing pains. But the companies that were responsible for the problems, while always standing by to help, leaned over backwards to prevent any "company town" atmosphere to develop.

Industry has helped with a gift (\$5,000 from each company) to tide the city over the first tough period before taxes began to come in. Now these companies are supporting annexation by the town of the new industrial area so that they can pay their taxes to the township instead of the county, and in this way better support the

city in providing necessary services for the growing population.

The new plant superintendents—Pennsalt's Red Tomlinson, Air Reduction's Charlie McKim, Goodrich's Tom Nantz—have become leading citizens of the town. But they are not company spokesmen, since none of the companies speaks on matters of municipal policy.

They—just like Luther Draffen and the other old-timers—are citizens of Calvert City first; yet in their individual concern for civic problems, they can't help but reflect credit on their employers.

COMPANIES

Sales and purchases:

- The Harshaw Chemical Co., Cleveland, has bought the assets of Rufert Chemical Co., Seymour, Conn. Its present intention: to continue production of Rufert's nickel catalyst flakes; to employ present personnel and manufacturing methods.

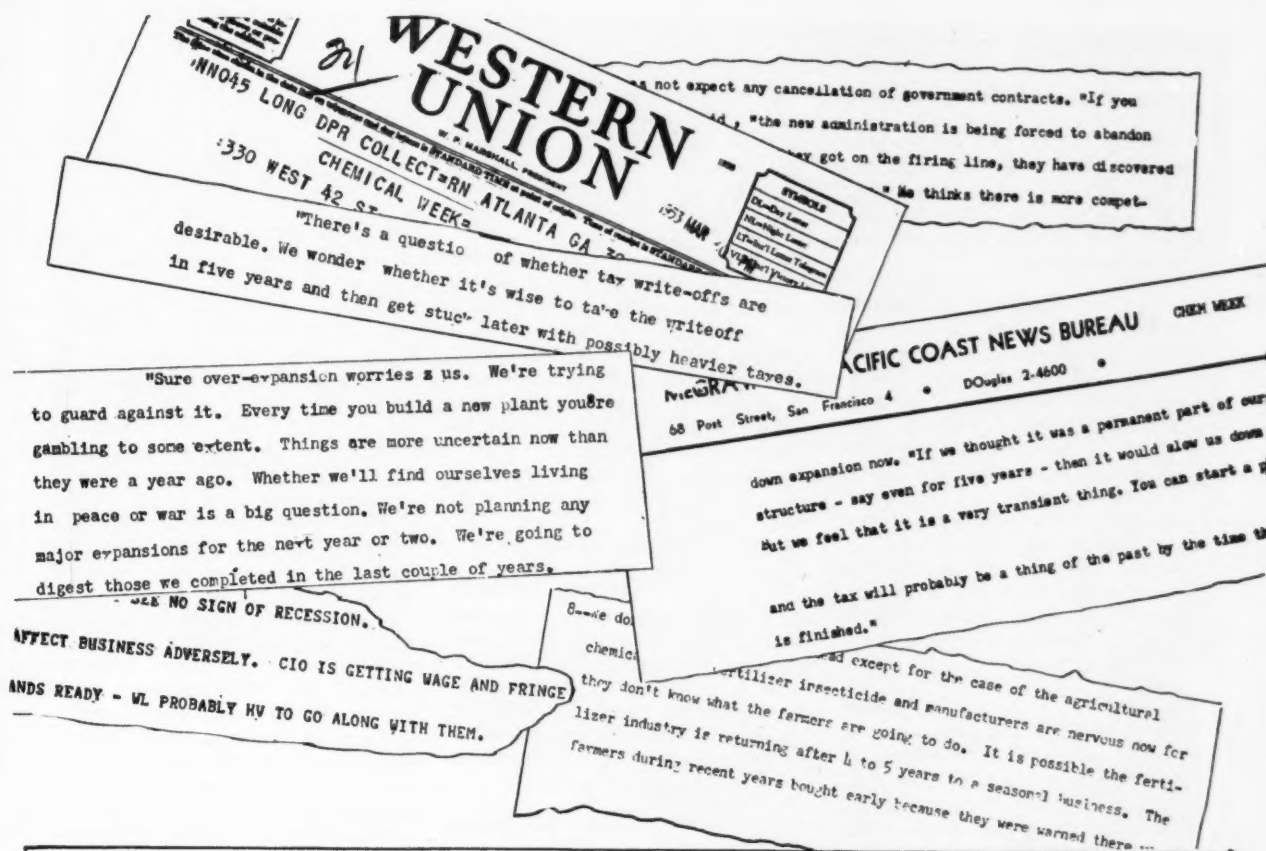
- Union Oil Co., California, has sold its interest in Trans Mountain Oil Pipeline from Edmonton to Vancouver at a profit of \$3 million. Reason for the sale: Union did not pick up its option on a refinery site near Everett, Wash., consequently decided to dispose of its interest in the pipeline, which would have served a plant there.

- American Plastics Corp., a wholly-owned subsidiary of Heyden Chemical Corp., purchased the Reinforced Plastics Div. of the Auburn Button Works (Auburn, N.Y.). Removal of the entire machinery and equipment involved in the deal to American's Bainbridge, N.Y., plant has been accomplished.

- American Agricultural Chemical Co. bought a 25-acre tract in Johnson Township, Webster County, Iowa.

- Food Machinery & Chemical Corp., San Jose, Calif., acquired controlling interest in Varley Pumps & Engineering, Ltd., Brentford, England. The purchase is reported to be part of Food Machinery's program of expanding foreign manufacturing operations in the interest of maintaining and servicing world-wide markets for its division-made product lines.

- Linde Air Products Co., a subsidiary of Union Carbide & Carbon Corp., and Stauffer Chemical Co. have revealed plans to build new factory facilities in the Ohio Valley area near Marietta, O. Adjoining tracts of land, having access to the Ohio River, have been purchased.



SUBJECT

What Worries Chem. Execs

LENDING an attentive ear to chemical industry's top management, CHEMICAL WEEK has conducted a nationwide worry-session this week. Its purpose: to find out what management is most concerned about, what it sees as industry's main problems in 1953.

For the most part, top drawer worries are of a near-term nature. Biggest headaches: excess profits taxes, difficulty in ferreting out competent personnel, stiffening competition. Over the long haul, confident optimism exudes from all sections of the country. But sifted out of the mass of opinion, certain storm centers appear.

Excess profits

taxes take the dubious distinction of being management's most discouraging problem today. "There is no sense expanding further with only 18% return on the dollar," mourns one president. Another states flatly, "We've been badly hit by e.p.t.; if we could get it off our necks, about 75% of

profits would go to stockholders, and the U.S. would get it in taxes anyhow."

Still another: "Expansion now means no appreciable progress; and besides, under the tax, you've got trouble justifying expansion."

A small minority claim e.p.t. is "no major worry; depletion allowances make it unnecessary to pay it." Or, "we have been able to expand rapidly because of our ability to get certificates of necessity; whether it will be a chain around our necks will depend upon the status of the market when we get into full production . . . and we expect e.p.t. to be a painful memory by then."

"It's not slowing down expansion much now," opines one chairman of the board, "but if we thought it was a permanent part of our tax structure, say for, even five years, it would slow us down to a crawl. But we're banking on its being a transient thing, hope it will be gone when many plants open."

Tax write-offs

cause mingled sentiment too; even di-

rectors in the same company are often split in opinion. Some like them, but find them more difficult to obtain today. Others are skeptical, modestly admit "we've taken them in each case when we wanted to build a new unit, but we don't covet capacity gained in this way"

Others don't like the risk involved, wonder whether it's wise to take the write-off in five years and possibly get stuck later with heavier taxes. To some, e.p.t. is the culprit involved in write-offs. "And," remarks a plastics president, "materials that a certificate once helped to get are readily available now."

Union troubles

have generally settled down. Many reasons are suggested: since the oil strike, when a general pinch was felt, things have been easier; the cost of living is down; unions may be waiting to take stock of official Washington attitudes. Still more: "There has been a general settling-down due to better union leadership;" . . . "riddance of radical leaders;" . . . "the CIO is

getting wage and fringe benefits now, making them more agreeable."

Only a few leaders are doubtful, see labor as "no more militant than before, but they keep us on our toes." Or, "labor troubles might be more serious this year; there are still more jobs than workers."

Balking stockholders

are headaches to some chemical executives. "They're more cautious, want to take a closer look before undertaking further expansion," says one. "Our chief trouble with them," says another, "is trying to explain why, though sales are up, earnings haven't risen proportionally."

In disaccord, a petrochemical president decries his stockholders' confidence. "They're even more bullish than company management, are inclined to believe expansion should be unlimited. My biggest single worry is holding them back."

Loans,

both short- and long-term, seem to be fairly easy to get; only from isolated sections of the U.S. come complaints of difficulty. But management is pausing in seeking them. Their reasons: decreased earnings, high rates, cost of financing.

Plant sites

in general provoke divergent comments. "It is not too rough to obtain suitable plant sites in Texas and Louisiana," offers a vice-president, "if you don't limit yourself to a very narrow area." Another has found the Houston Ship Channel rough, other spots more plentiful. "The idea that Texas and Oklahoma are superior locations because of favorable gas rates is a myth," volunteers another. "Rates have doubled in the past year, freight charges are huge. We're turning now to the Niagara Falls district."

On the West Coast, executives have found plant sites much harder to come by in the San Francisco vicinity. General difficulty seems to be a lack of necessary acreage.

Overexpansion,

the cry of "outsiders looking in" is not serious, aver most leaders. Perhaps, theoretically, the chemical industry is overexpanded, they agree, "but over the long haul the growth will be digested." Some point to acrylonitrile as overexpanded; others think Texas "will burn itself out." The plastics industry sees itself "as still in our infancy, no danger;" nitrogen manufacturers feel that "everyone still feels bullish, ours is a gigantic thing."

An occasional voice breathes warning. "Every time you build a new chemical plant you're gambling. Things are so uncertain now, we're planning no major moves for the next year or so."

Recession

is not a great fear today. Most men feel that some spotty ups and downs lie ahead, but that as long as the country needs materials, the general trend will be upward. But a few point to agricultural chemicals as a critical sector to watch. "Fertilizer and insecticide manufacturers are nervous now, not knowing what the farmers are going to do. Perhaps the fertilizer industry, after about five years, is returning to a seasonal business."

Natural resources

are generally accepted as a constant bother. "It's the raw material contracts we all have to live with that cause us gray hairs." Some particular shortages exist: "Butadiene is short, hinders operations; oil, gas and sulfur are being used up, potash was short a few years ago."

Tariffs and Duties

are "always a worry." Some executives reveal an "inability to get into Canada because they [the Canadians] favor the English." Others feel that tariffs of other countries (Canada, Latin America, Japan, England) are as much of a hindrance to U.S. trade as our own.

A hard core flatly asserts that "there is no danger in lowered tariffs. It might do us good."

Manpower shortages

are a bane of most industry men. "We're short on experienced personnel," they cry, "recruiting teams are beating the bushes, are re-evaluating jobs for delegation to nontechnical help, are pushing training programs."

High-bracket men are apparently especially hard to produce; high income taxes are put forth as the largest single drawback. Some executives, however, see a ray of hope. "It's much harder to find them today," they assert, "but the men seem more interested in their long-term future than in the immediate job. That helps us."

The new administration

in Washington has apparently come up to management's expectations. "We like the new officeholders; we believe they're trying to undo some policies established over the past 20 years," is the general consensus of opinion.

But some demur. "They acted foolishly in removing price controls without industry's promise of holding the line. The result: some things have skyrocketed (e.g., a \$60/ton increase in hydrogen chloride, a \$4/ton rise in sulfur.) Or, "It's business as usual in Washington. This is going to be a long grind."

Stiffening competition

is the greatest single challenge to managers today. Their reaction: "It just means scratching harder for sales." Some presidents not particular fields in which competition has tightened. "In the fertilizer end of our business, the trouble comes from foreign sources; imports are underselling us." Or, "sales in synthetic resins are getting tougher to make, but it's a healthy situation."

To others, competition has made a different impression. "It's what has made price controls going off mean nothing." And, "The tightened market is mainly the reason why we don't dare expand. We can't afford to take the chance until the market shows signs of being ready to absorb more; five years ago the sky was the limit."

Most, however, bubble with confidence. "We're young, we're growing; our headaches evaporate in thoughts of what we can do, what we can gain."

EXPANSION. . . .

Fertilizer: Mathieson Mississippi Corp., newly formed joint venture of Mathieson Chemical Corp. and the Mississippi River Fuel Corp., is reported to be considering plans for construction of a fertilizer plant to cost over \$30 million. Site has not been determined; Jefferson County, Mo., Louisiana and Texas locations are being studied.

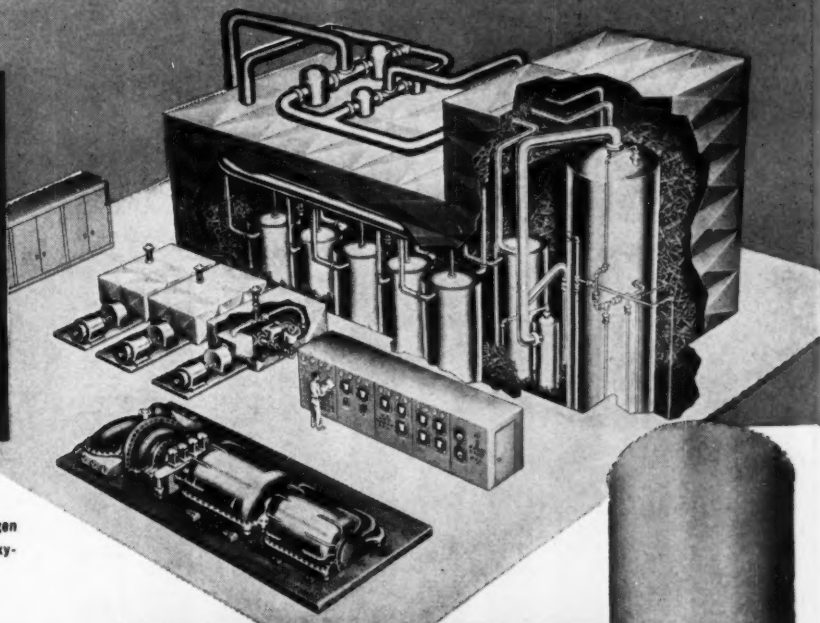
Triple Superphosphate: The J. R. Simplot Co. was scheduled to start production this week of triple superphosphate fertilizer at its Pocatello, Ida. plant. Work is near completion on installation of two filters for making phosphoric acid, and when a third filter is installed late this year, production will approach 90,000 tons/year.

Safflower Oil: Safflower oil for paint and meal for livestock feeding will be the main products of a \$250,000 mill to be constructed by the Western Safflower Corp. in Colorado Springs. Mill capacity: 125 tons of safflower seed (thistle) daily, with eventual expansion to 400 tons. Estimated production date: Sept. 1, '53.

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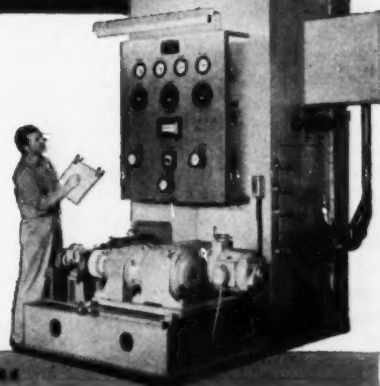
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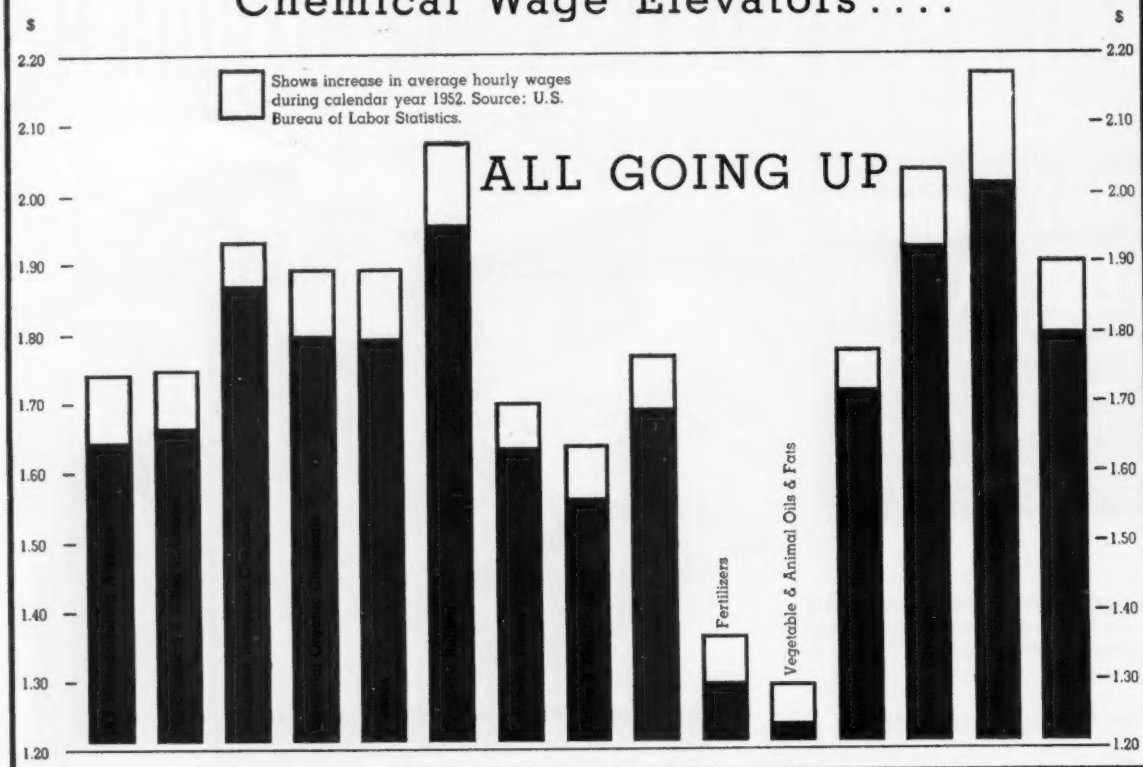
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Chemical Wage Elevators . . .



Wage Flashback: Sieve-Like Ceilings

Again in 1952, chemical wages stayed ahead of the nation's all-manufacturing average, with rates continuing to climb this year.

While chemical workers averaged 25% more weekly pay in 1952 than in 1948, creeping inflation held their gain in purchasing power to 15%.

Wage ceiling regulations were nominally in effect from September, 1950 until last month, but they didn't stop chemical wages from rising by an average of more than 8¢/hour last year, and another 1½¢ in January of this year.

Industry observers naturally are wondering whether this 15-year upward trend that continued practically undiminished during the wage control period won't keep right on now that ceilings are off—unless it's broken off by other factors.

While hourly wage rates in the chemical process industries moved up by an average of 5.3% during 1952, chemical process companies' weekly payroll total went up by just 4.1%, as the average work-week was 30 minutes shorter.

Soap Makers Set Pace: Biggest in-

crease in chemical wage rates last year was the 11.4¢ rise for soap, glycerin and detergent employees; and the next largest increment was 10.4¢ for synthetic rubber workers. Thus these two groups forged farther ahead of other chemical workers in hourly pay. Average wage rates for January, 1953 ranged from \$2.074 in synthetic rubber and \$2.03 in soap and glycerin down to \$1.356 in fertilizers and \$1.303 in processing of oils and fats.

Smallest boost in hourly pay during 1952 went to workers in that lowest paid group, 5.7¢/hour. However, last year treated them much more kindly than the year before; during 1951, there was a 1.1¢ drop in wage rates for workers in animal and vegetable fats and oils. How employees in other segments of the industry fared last year is illustrated in the chart (above).

Purchasing Power Lags: Combined effects of collective bargaining and the Korea-inspired defense program pushed chemical wages up by 25.4% in the past five years, from \$56.23 in 1948 to about \$70.50 in 1952. But in terms of 1939 dollars, chemical workers' purchasing power climbed by only 15.6%, as wage equivalents were \$32.70 in 1948 and \$37.80 last year.

With weekly payroll costs up by 4.1%, and with company net earnings down by that same percentage over the same 12-month period (CW, Mar. 21), it appears that labor union leaders in this field will be able to claim considerable progress during 1952 toward one of their major objectives: "that those who toil shall enjoy to the fullest extent the wealth created by their labor."

Plainly, continuation of these two profit-consuming trends this year would lead to widespread dissatisfaction among chemical stockholders. Accordingly, it's a fair guess that management will be more adamant on cost-raising propositions this year, and that, consequently, wage increases will be harder to come by.

Chemical Week • April 18, 1953

Junior's doing well

New nitric acid plants at Sheffield, Alabama



Junior's in the foreground—a 2 line nitric acid plant, brought into the world in 1952 by C & I. Sitting pot-bellied in the background is the old man—a 12 line plant dating back to 1917.

Here's the story: The new plant per ton costs $1/2$ as much, occupies $1/12$ the space, has 2 times the capacity per unit and uses $1/3$ the man power.

Engineering stories like this explain why C & I is the nation's number one builder of nitric acid plants. With its experience in engineering, design, and construction, C & I will deliver your plant at a **FIXED COST** on a **FIXED DATE**. C & I builds Nitric Acid, Neutralizer, Ammonium Nitrate and Complex Fertilizer plants.

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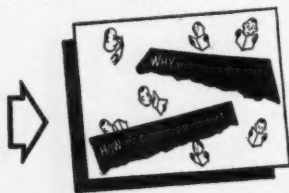
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BUSINESS & INDUSTRY.

Let-up on Law Suits?

Up until this year, the Antitrust Division of the U.S. Department of Justice had been bustling through the busiest period of its 63-year past. Under Roosevelt and Truman, the list of companies in antitrust trouble reads like a "Who's Who in American Industry."

Among chemical companies on this list at one time or another since 1933: Allied Chemical & Dye, American Potash & Chemical, E. I. du Pont de Nemours & Co., Merck & Co., Monsanto, National Lead, Rohm & Haas, Standard Oil (N.J.), and Victor Chemical Works.

However, since Nov. 4, antitrust activities have been on dead center. True, some "lame duck" cases were filed after the Republicans' recent election triumph. Among them was the suit filed in December against the "big three" soap manufacturers.

Californian Chosen: Late last week, President Eisenhower and Attorney-General Herbert Brownell, Jr., announced "with satisfaction" that the position of chief of the antitrust division will be accepted by Stanley N. Barnes, presiding judge of the Superior Court of California in Los Angeles. Barnes, 52, served in the Navy during World War I, played football at Univ. of California, studied law at Harvard, then practiced law in Los Angeles until his court appointment

under the Democrats. The Democrats were accused of making political capital out of antitrust suits. The new administration, however, is admittedly



JUSTICE DEPT.'S BROWNELL: For antitrust, new man, new policy.

a businessman's administration—which makes antitrust a tough assignment for the new man from the day he takes office. He has to decide (a) what to do about carrying forward the 135 cases already on the books, and (b) what kind of an antitrust policy to pursue from here on out.

Just a few months ago, Robert T. B. Stevens—now Ike's Secretary of the Army and then chairman of the J. P. Stevens Co. textile firm—headed up the Commerce Department's business advisory council study of government antitrust policy. The council's report called for a policy revision, making possible the settlement of 90% of all antitrust cases out of court.

No Sudden Surrenders: Brownell has kept some current cases going that he could have ditched. Among them are the Du Pont case in Chicago, and the investigation of the major oil companies on charges of operating as a cartel abroad. Brownell asked for and got a 90-day delay in January to check into the national security considerations involved in the oil case.

One major antitrust case against a chemical company is so far down the long road of litigation that it can't be touched by the new GOP policy makers. Both sides have made their final arguments on 1947 charges that Du Pont and six foreign companies monopolize the cellophane cap and band

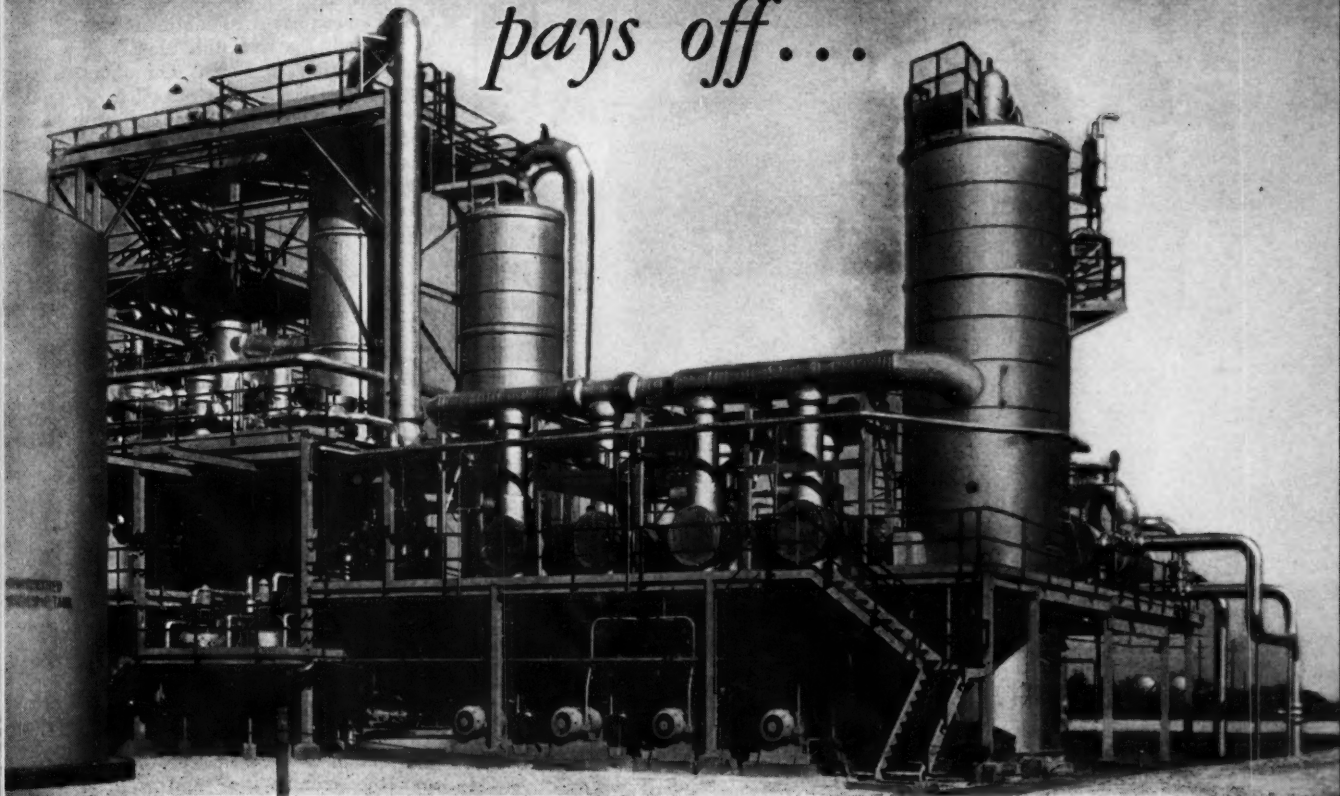


ANTITRUST'S BARNES: For pending cases, a reconsideration.

by Gov. Earl Warren in 1946. He's expected to call for a thorough review of pending cases.

Obviously, the job is a hot seat, more so under the Republicans than

Integrated Engineering *pays off...*



... the new plant of THE CHEMSTRAND CORPORATION at Decatur, Alabama, manufactures the synthetic fiber, Acrilan, from acrylonitrile—a product of natural gas and air.

Vulcan's part in the construction of this huge plant was to lick the tough problems associated with the design and completion of economical solvent recovery facilities.

Chemstrand brought Vulcan into the picture early to design and supply the pilot plant and semi-commercial units. These units yielded data on which design of the commercial plant was based, incorporating advanced techniques in large scale vacuum distillation and vapor re-use.

As a result of this integrated service from development through commercial operation, the Chemstrand solvent recovery plant was put on stream within the unusually short start-up time of 48 hours and has consistently produced the high-grade recovered solvent required in the manufacture of Acrilan.



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B & I

industry, and the judge's decision may come any day.

Beside the cellophane case, about 14 other chemical cases are pending out of an estimated 135 antitrust cases of all kinds that are still "alive."

Two Trials to Begin: On almost any one of these—as in the oil cartel investigation—Brownell or his new antitrust chief can say, in effect, "Let's call it quits." Even after a case gets under way in court, the government could dismiss it with the judge's consent, or both sides could negotiate a consent decree.

The Du Pont-General Motors-U.S. Rubber split-up case in Chicago is the only chemical case currently being tried. Among others on the docket:

- The Bayer Co., Inc.: General Aniline & Film Corp. has filed an answer to a government complaint charging Aniline was attempting to enforce contracts dividing world markets in pharmaceutical products between The Bayer Co. (now Sterling Drug) and I. G. Farben. A consent judgment in 1941 barred further performance of these contracts by Bayer and Sterling.

- Wallace & Tiernan Co., Inc.: Trial is expected to begin soon in Rhode Island on charges filed in 1947 against nine companies, alleging conspiracy to monopolize production and distribution of chlorinating equipment and the manufacture and sale of chlorine compounds.

- New Wrinkle, Inc. and the Kay & Ess Co.: Trial expected this spring in Ohio on charges filed in 1948, alleging a conspiracy to restrain trade in wrinkle finishes for paint, enamel and varnish.

Two cases haven't moved a step, according to Washington records. One is the December suit against the big three soap makers; the other a 1948 complaint that Union Carbide and four other companies conspired to monopolize ferrovanadium and vanadium oxide.

Most of the chemical cases have not yet gotten to the trial stage—and could be influenced by the policies of the new antitrust chief.

Softener 'No'

Though being sold, polyoxyethylene monostearate bread softeners still are taboo for standard breads, and manufacturers now must look to the U.S. Department of Health and Welfare for another chance to get federal clearance on the controversial products. In the last step in the proceedings stemming from the Federal Security Administration's ban on the softeners last May, the U.S. Supreme

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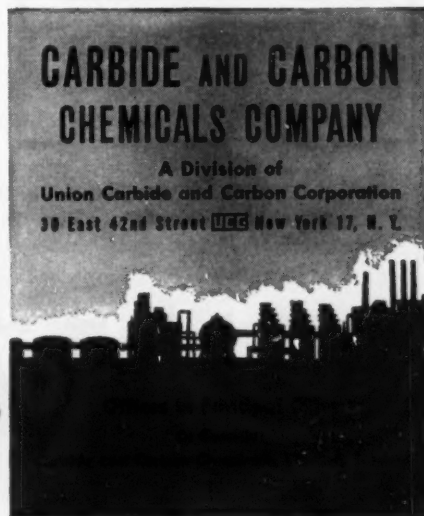
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METAL BARRELS AND DRUMS



B & I

Court has refused to hear the appeals of Glyco Products Co. and Atlas Powder Co. Thus the prohibition against Glyco's Sta-soft and Atlas' Myrj 45 will remain in effect unless and until the new government department, headed by Oveta Culp Hobby, decides to review evidence on toxicity of the softeners.

More Think-over Time

Republican leaders in Congress are still in a hurry to set up a program for selling the 29 federally owned synthetic rubber plants to private industry, but they're willing to give the Eisenhower administration one more month to draft its auction proposal (CW, Apr. 4).

This will give Eisenhower until May 15 to send his recommendations to Congress. Actually, the plan may come a few days earlier so that it will be on the record when the international rubber study group convenes in Copenhagen, Denmark, May 11.

A GOP drive is on to get the disposal machinery in operation before this Congress goes out about 18 months from now. Reason: if the Democrats should come back to power, even in one house, they could stop or stall the move. Some Democrats in both the House and Senate armed services committees have strongly favored retention of synthetic rubber in government hands.

No Meek Acceptance


With heads unbowed, three companies spearheading the battle by some 90 natural gas companies against the gas gathering tax in Texas are carrying their fight to the Texas Supreme Court.

In appealing the decision of the Court of Civil Appeals, which reversed a lower court and called the tax legal (CW Newsletter, Feb. 14), the gas companies scuttled a recent rumor that they would give up the struggle to have the tax declared unconstitutional. Only grounds for such a rumor: if the gas gathering tax is nullified, the state legislature probably will impose some other levy; so, said the dopesters, the gas companies might as well accept the present tax.

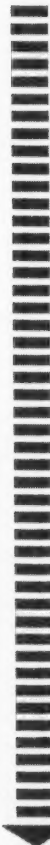
Many chemical and petrochemical companies are helping to pay the gas tax, a \$1-million/month expense that the gas companies have to pass on to their customers.

The pipeline companies argue that if Texas can tax natural gas that is consumed in Michigan, then Michigan can tax Detroit-made autos that are sold in Texas.

The case appears headed for the U.S. Supreme Court.



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BUSINESS & INDUSTRY.

New Rules for Industry

Chemical industry operations and materials—everything from dynamite and fluoridation to factory safety and taxation—are subjects of bills being debated in state legislatures across the country this week.

Some of these proposed laws are narrow in scope, like a New York bill to outlaw use of sodium pentothal as an anesthetic for persons under the age of 16. Other bills are so broad as to apply to all manufacturing companies, like a Michigan proposal for a 2½-

and estimated potential revenue: 5¢/ton on coal, lignite, asphaltic limestone, gypsum and salt, and 18¢/ton on Fuller's earth, asphalt and bentonite—\$200,000/year; 7 to 26¢/1,000 board ft. on lumber, 2½¢/100 lbs. on lime, and 2½¢/ton on sand, shell, gravel, limestone, granite, marble and sandstone—\$800,000/year; higher oil production tax—\$24.5 million/year; higher gas production tax—\$3.5 million/year; higher beer tax—\$17 million/year; and new ¼¢/gal. tax on motor fuel at refineries—about \$36.5 million/year.

Springfield Spatter: Illinois lawmakers have been especially busy with bills of concern to chemical processing companies. Among them:

- Tabled in committee in both houses, a bill that would have required each company employing 25 or more persons to institute an industrial safety program and hire a safety supervisor.

- Adopted by both houses, a resolution for investigation of the controversy at the Univ. of Illinois over "krebiozen," a drug claimed by its inventor to have value in treatment of cancer (CW Newsletter, Mar. 21).

- Passed by the senate, a deficiency appropriation of \$100,000 for the Illinois Coal Products Commission (which has been researching on liquid fuel from coal) has run into opposition in the house. A subcommittee minority report charges that the commission used state funds to improve private property.

- Pending in the senate, a bill that would set up a commission to survey air pollution throughout the state.

- Pending in the house, a bill that would make river or stream pollution a criminal offense.

- Five bills on fireworks regulation.

These Illinois bills reflect the variety of legislative proposals being pondered in most of the states this month. Other examples: fertilizer tax and fertilizer labeling in Arkansas; new examination rules for engineers in Colorado; phosphate pollution of streams in Florida; manufacture of insecticides by penitentiary inmates in Oklahoma; and colored oleo legality in Iowa, Montana, South Dakota, Vermont, Wisconsin.

Whether chemical firms should organize to act on these bills (CW, Mar. 21) or merely write letters to local legislators, this much is clear: the companies must at least keep track of state capital goings-on.



TEXAS' SHIVERS: How much bite on chemical companies?

mill tax on all sales by manufacturers and wholesalers.

Many of these bills, if enacted into law, would affect industry in every state, even though a legislature's authority runs only to the state boundary. For example, until the Arkansas senate amended to death a bill that would have drastically increased the severance tax on bauxite, it appeared likely that there'd be a major rise in bauxite and aluminum prices, as Arkansas is the No. 1 domestic source of the ore.

Direct Tax Suggested: In Texas, where chemical companies may have as much as \$2 billion invested in plants and equipment, a hearing will be held next week on a proposal for a direct tax on chemical income. Rep. George S. Berry of Lubbock has introduced a bill designed to raise \$84 million for highways, pay rises for teachers and state employees, and college and state hospitals—\$2 million of it by a 1% levy on chemical companies' gross receipts.

Other features of the Berry bill,



Point of Integration

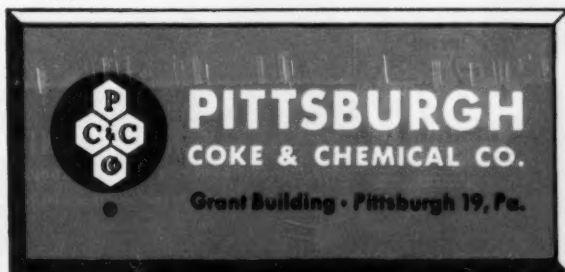
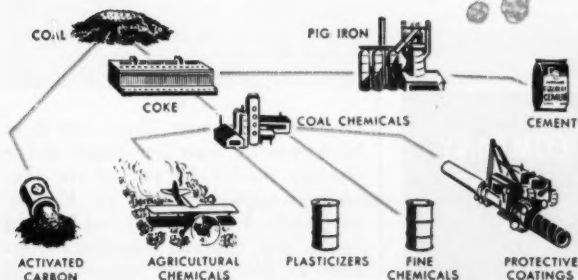
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FOREIGN.

Rayon/Japan: Asahi Chemical Industry Co. Ltd. (Tokyo) is reported to be seeking an agreement with Beaunit Mills, Inc. (New York) for rights to Beaunit's cuprammonium rayon continuous spinning process. Asahi is expected to pay \$100,000 initially, with additional payments to be based on its production of spun rayon. Asahi will make available to Beaunit certain of its present processes for solution-making and chemical recovery.

Oil/Canada: The Alberta Government plans to auction in early summer the plant it built for experiments on the extraction of oil from the Athabasca tar sands.

Ammonium Sulfate/Formosa: The Nationalist Government of China is reported to have closed a deal with West Germany for bartering 13,000 tons of sugar for 25,000 tons of ammonium sulfate.

A similar offer has been received in Japan—250,000 tons of sugar for 500,000 tons of ammonium sulfate.

Nylon/West Germany: Deutsche Rhodiaceta A.G. (Freiburg) is producing nylon. Monthly output: 10 tons—to be increased to 50 tons upon completion of the plant.

The firm took up the manufacture of perlon in 1949, started making rhovyl (a fiber similar to Orlon) a few months ago. Its annual output of acetate rayon: 450 tons/month.

Phthalic Anhydride/Austria: Reports are that Austrian Nitrogen Works (Linz) has completed erection of its phthalic anhydride plant.

Titanium Dioxide/Japan: According to an agreement between Nippon Titanium Co., Inc. (Tokyo) and R. S. Aries & Associates (New York), initial production of several grades of titanium will begin in Japan by late 1953.

Terms of the pact provide for the participation of the Aries organization by stock ownership in the Japanese firm, and for their continuing engineering services in expanding production and in making available the newer types of titanium pigments. Anticipated capacity: 150 tons/month of several types of pigment by late 1953.

Dyestuffs/Germany: Three new dyes have recently been introduced to the German market by two of the successor companies of I. G. Farben. Farbwerke A.G., Hoechst, has brought in the acid dyestuff Remalanbrillantblau B, plugged as "surpassing all

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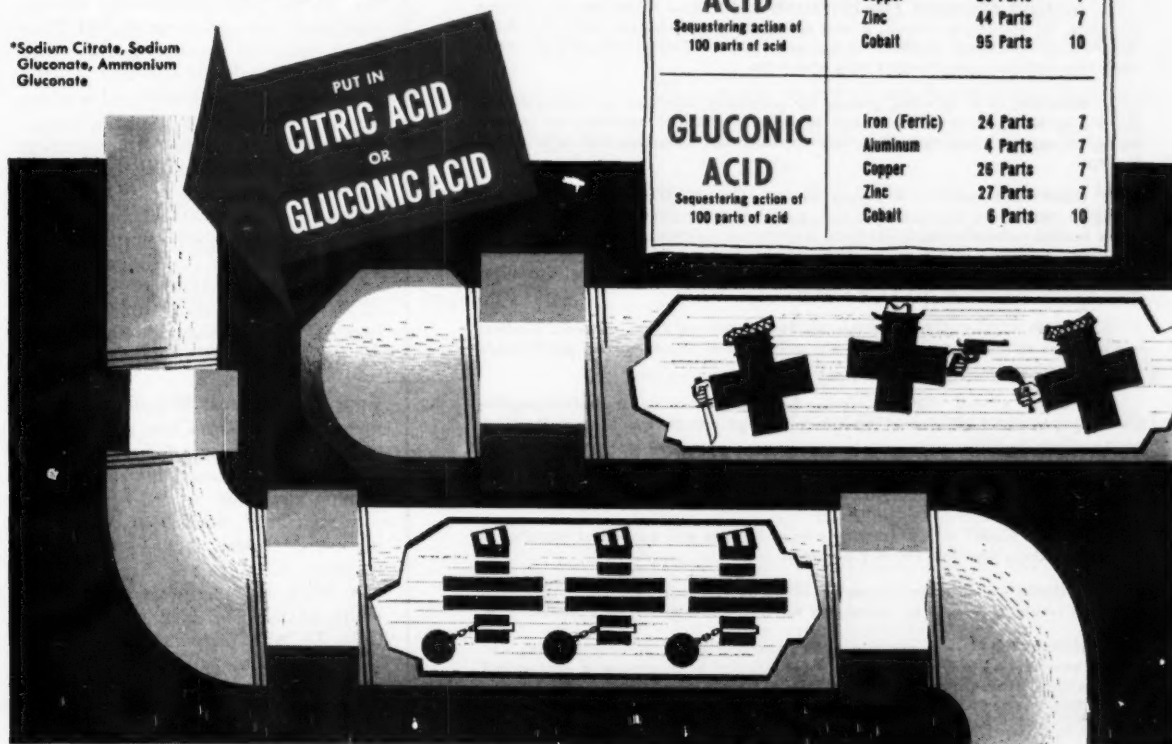
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	Zinc	44 Parts	7
	Cobalt	95 Parts	10
GLUCONIC ACID Sequestering action of 100 parts of acid	Iron (Ferric)	24 Parts	7
	Aluminum	4 Parts	7
	Copper	26 Parts	7
	Zinc	27 Parts	7
	Cobalt	6 Parts	10



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Walter R. Meyer, Ph. D.

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known acid blue dyes," and suited for polyamide fibers. Badische Anilin-und Sodafabrik, Ludwigshafen, is producing Basolanchromrot, a uniform red dyestuff for after-chromiumizing, and Lurantin light turquoise blue FBL, a uniform substantive dyestuff that withstands bleaching.

LABOR

How Many Members?: Officers of labor unions like to use nice, round figures in talking about their membership totals, but once each year the public gets a chance to estimate actual membership data. That opportunity comes when the union files its financial statement in Washington, as required by the Taft-Hartley law. International Chemical Workers Union (AFL) reports an income of \$907,260 from its \$1/month per capita tax during the 12 months ending last June 30, which means that ICWU had an average of about 75,500 dues-paying members during that period. For its fiscal year ending Jan. 31, United Gas, Coke & Chemical Workers (CIO) lists receipt of \$821,594 from per capita tax, so its paid membership for the past year averaged about 68,500. Thus those two rival unions together were representing about one-fifth of the nation's hourly paid chemical workers during 1952. District 50 of the United Mine Workers claims to represent about 100,000 chemical employees, but ICWU contends that District 50 hasn't more than 50,000 members in chemical plants. UMW figures can't be checked, because that union doesn't comply with Taft-Hartley. As of now, ICWU says it has about 105,000 members; Gas-Coke claims between 75,000 and 80,000.

Four Acquisitions: Whatever its former total, the Gas-Coke membership now has been augmented as the result of victories in these four recent bargaining elections:

- In runoff election at Mathieson plant in McIntosh, Ala.—Gas-Coke 43, no union 42.

- With 111 eligible employees of Delta Match Co., Kenner, La.—Gas-Coke 71, AFL Carpenters 40.

- At Wilson, Ark., where 114 employees of Buckeye Cotton Oil were eligible to vote—Gas-Coke 67, no union 43.

- Paint-manufacturing employees of Stebbins & Roberts, Inc., Little Rock, Ark., with 100% participation—Gas-Coke 13, against 12.

OWIU In Suit: Also in the headlines this week is the Oil Workers International Union (CIO), which represents

Looking for COAL?

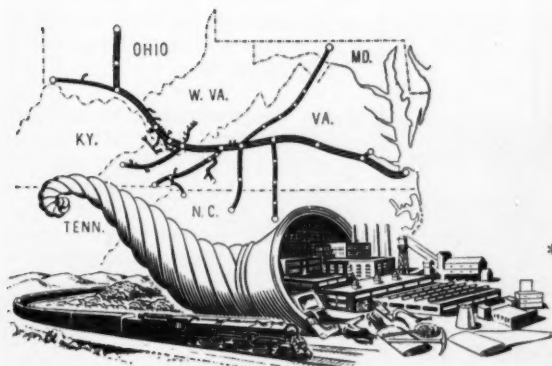
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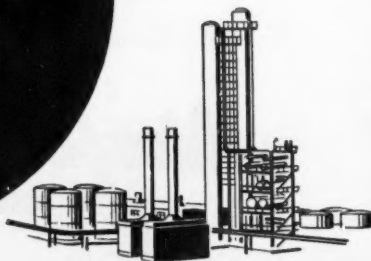
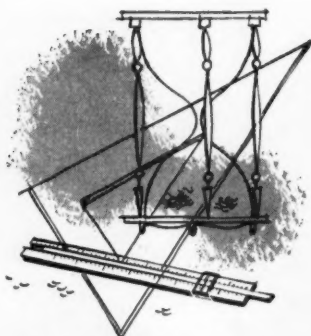
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several thousand employees in petrochemical and oil refining plants.

• At Port Arthur, Tex., OWIU President O. A. (Jack) Knight gave notice that his union will demand an across-the-board wage increase of 7¢ in all new contracts this year. Also wanted: a contract clause providing for annual pay rises for greater productivity.

• Staring OWIU in the face at Toledo, O., is a suit for \$1.4 million. Gulf Refining filed the suit in U.S. District Court, claims OWIU's current strike that shut down the company's Toledo refinery is a breach of contract. Union Attorney Lowell Goerlich asserts that the union has the right to strike because there isn't a no-strike clause in the contract extended last fall while the two parties tried to draw a new agreement.

• **Honeymoons at Buffalo:** Following settlement of last month's strikes, industrial relations are blissful at two chemical plants near Buffalo.

• New clauses on vacations, insurance and hospitalization won approval of some 375 members of United Rubber Workers (CIO) who had been on strike 10 days against U.S. Rubber Reclaiming Co., Inc. Union President Elton Gladney says the hospitalization clause now fully covers all retired employees and their dependents, with the company paying all costs.

• A two-week strike by more than 300 employees of National Gypsum's Clarence Center plant (near Buffalo) ended when the strikers were told that "misunderstandings over working conditions would be ironed out." The strikers are members of Gas-Coke Local 247.

• **Union Objects:** In quick response to the Labor Dept's proposal that the minimum wage in the paper industry be set at \$1.11½/hour under the Walsh-Healey Public Contract Act, the International Brotherhood of Paper Makers (AFL) has filed an exception. The union avers that the minimum wage rate for paper-making on large government contracts should be at least \$1.40/hour.

• **Union Conglomeration:** Multiple negotiations with eight AFL unions, bargaining in three groups, have resulted in new contracts covering about 1,275 of the employees at Dow's Texas Div. (Freeport). All sides were close-mouthed about terms of the new pacts. Other Dow employees at Freeport are members of three other AFL unions whose contracts run until this summer.

DOUBLE CHECKED ✓
FROM RESEARCH TO INDUSTRY

SHARPLES SECONDARY AMINES

VERSATILE INTERMEDIATES FOR THE CHEMICAL INDUSTRY

Diethylamine $(C_2H_5)_2NH$

Dipropylamine $(C_3H_7)_2NH$

Diisopropylamine $[(CH_3)_2CH]_2NH$

Dibutylamine $(C_4H_9)_2NH$

Diisobutylamine $[(CH_3)_2CHCH_2]_2NH$

DIISOPROPYLAMINE

$[(CH_3)_2CH]_2NH$

A catalyst in some reactions—

- Where a strongly basic volatile catalyst is indicated.
- Where other amine catalysts will be consumed by the reactants.
- Where easy separation of the catalyst from the reaction mass is desirable
- Because it is sterically hindered (for example, Diisopropylamine requires 50°C. higher temperature and correspondingly higher pressure for reaction with ethylene oxide than does diethylamine)

AMONG RECENT APPLICATIONS OF SECONDARY AMINES ARE THE FOLLOWING:

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RESEARCH

Sealing a Barnyard Bond

AT TERRE HAUTE, Ind., this week, the bond between livestock pathology and nutrition was formally sealed by Chas. Pfizer & Co. Occasion: the official opening of Pfizer's new experimental farm and laboratories. Located on a 700-acre tract about five miles southeast of Terre Haute, the agricultural research center comprises about nine acres of laboratories, barns and auxiliary buildings. It's big, all right, but bigness isn't its only distinguish-

ing feature. More important, the new layout is a full-scale attempt at coordinating the veterinary and nutritional arms of livestock science in one broad program.

Antibiotics, as one might guess, will be prime movers behind the bulk of research at this bucolic setting. Headed by Herbert Luther (*feeding lamb*), farm director, Pfizer's livestock researchers have their work cut out in resolving a spate of potentially rewarding wonder-drug puzzles.

High on the list is a thorough exploration of the effects of antibiotic supplementation on the growth and development of ruminating animals. One angle now under scrutiny is the effect of low levels of antibiotics on the benign microorganisms of the rumen. Object: to clarify conflicting reports on the value of low-level supplementation in calf-feeding.

The potential role of antibiotics in rabbit-raising is also drawing attention. Limited data available on the



PUMPING COW'S RUMEN is energetic prologue to lab probe of the effect of antibiotics on microorganisms of digestion.



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Turn page for more on new animal farm

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F. A. Nicholson, Manager of Pressure Vessel Service, Inc., of Detroit, says this about his company's new 3800-gallon Fruehauf Tank-Trailer, used for hauling muriatic acid to industries in the Detroit area: "Although Fruehauf's price for this unit was not the lowest, the Trailer was designed to meet *all* our hauling problems and needs. Our purchase was influenced by the integrity of the Fruehauf name, and the convenience of Fruehauf Factory Branch Service." The unit is frameless, and rubber-lined, with an outside coating of corrosion-resistant Epoxyn.

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Barnyard Bond (cont. from 36)

subject suggest that antibiotics do not increase the rate of growth of normal, healthy animals. But where there is a disease problem in the herd, antibiotic supplementation could be of real value.

Due for very close study is veterinary medication by the incorporation of high levels of antibiotics in feed rations. Thus far, the major use of antibiotics in veterinary medicine has been by way of parenteral administration or individual oral treatment. Yet

Pfizer researchers already have obtained highly rewarding results with feed medication in the prevention of the poultry disease, blue comb. Similar studies point up the promise of antibiotics in the treatment of poultry respiratory diseases and in the reduction of early chick mortality.

Also under way are studies centered on the therapeutic and prophylactic use of high levels of terramycin in livestock drinking water. A form of terramycin, "which gives consider-

able solubility in water," is playing a major role in these experiments.

Aside from its primary function in advancing the application of commercial chemical products, the new Pfizer research farm can be counted on to play a part in helping to solve the fundamental mysteries of how antibiotics do their beneficial work in animal nutrition. And evaluation of new antibiotics, as they appear, also figures to be a top-shelf, long-term project.



VETERINARY WORK ties in with nutritional in coordinated program. Rabbits' water is spiked with terramycin in enteritis test.

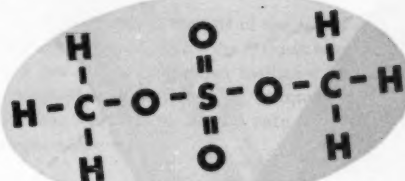


ORAL ADMINISTRATION of antibiotic is accomplished with capsule-loaded balling gun. Calf is being treated for white scours.



INJECTION is used to treat poultry respiratory infection. Gravity feed permits 500 rapid-fire shots from quart jar.

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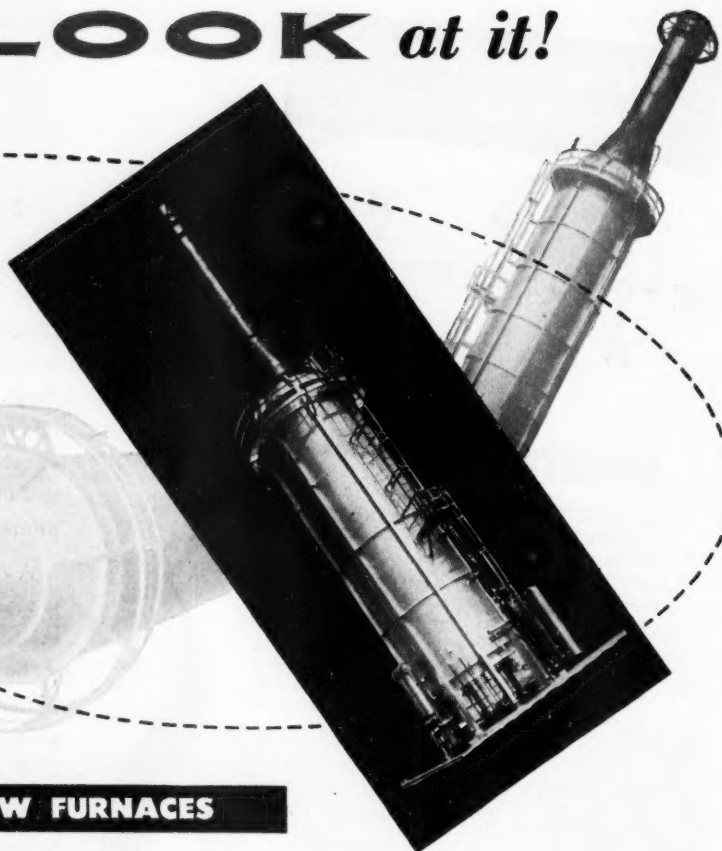
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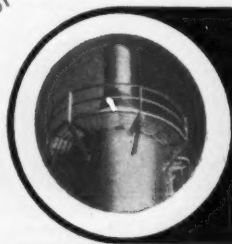
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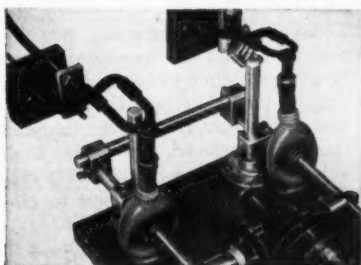
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April 18, 1953 • Chemical Week

RESEARCH



MONSANTO'S SOMOGYI (right): For improved research progress reports and . . .



. . . better lab shape-ups, pictures prove a novel, effective incentive.

Negatives Accentuate the Positive

DEVELOPMENT of even a positive attitude, much less enthusiasm, in those responsible for report-writing and laboratory cleanliness often seems a hopeless task to most research directors. Now Irving Somogyi, director of research and development for Monsanto's Merrimac Div. (Everett, Mass.), has just come up with a practical answer to this personnel poser. The answer: photographs.

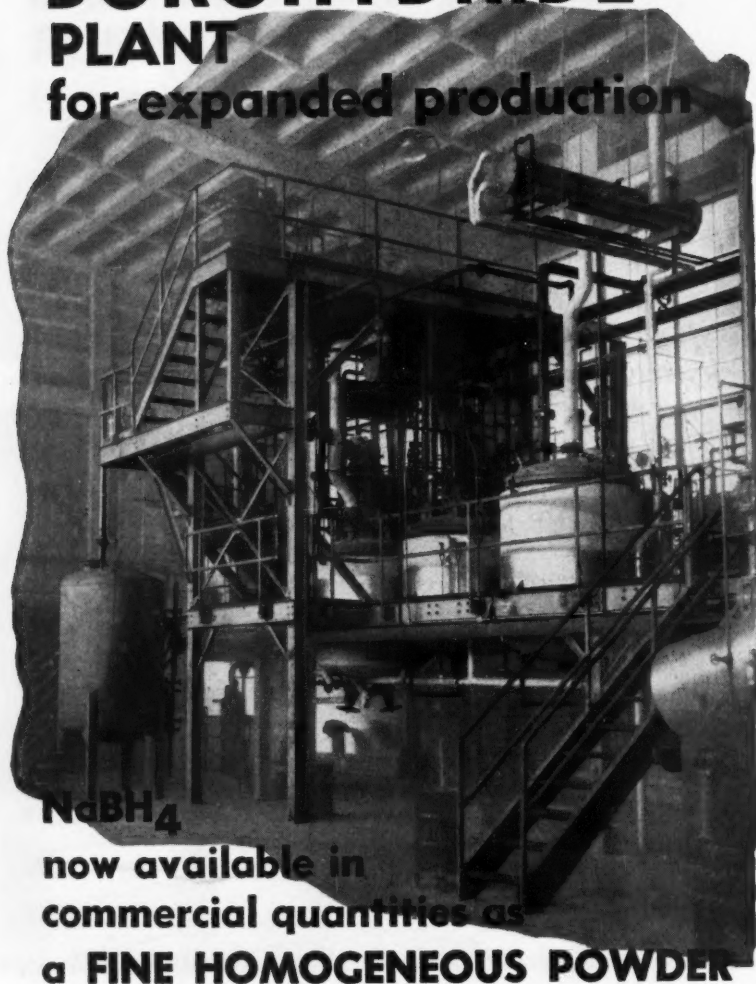
Pictures of the authors are attached to research progress reports; photos of those responsible for lab shape-ups are affixed to charts showing ratings for assigned areas. Each week the charts are posted, each month the

reports are circulated. Plant officials, both in and out of the research department, judge the reports, cite three to five as outstanding for the period. Ratings and citations are recorded for all to see.

Not only are results gratifying, says Somogyi, but the system shows sustained momentum. There is a steady and continual improvement in quality.

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RESEARCH

Molds Mature

Production may be sluggish, but penicillin research continues at a fast clip. More likely, because of this slowdown, competition has become keener than ever. And while the former star must now be content with character roles as the younger antibiotics receive the public's accolades, it can still look forward to many fruitful years; there are still parts only it knows how to play.

Today, as in the beginning, penicillin research aims at increased yields. Years ago higher yields meant greater supply; now they provide a competitive advantage. Even more desirable, though considered less likely, is development of new penicillins that might recover the glory lost to other antibiotics.

Whatever the goal, the route is the same. The research accent today is on precursors.* From such studies will come answers to these questions: How can yields be increased even more using man-made benzyl and allylmercaptomethyl groups? What other fragments will help the molds build up other parts of the molecule? What new penicillins can be developed?

Through pioneering precursor work by Robert Coghill† and others, yields have risen from 30% to 95% since 1943, give promise of going even higher. Most penicillin producers are interested in continuing these studies. Many are actively engaged but feel it's too early to talk. For a quick glimpse of over-all activity, here is the latest rundown on a few of the research hot spots:

- At Abbott Laboratories (N. Chicago, Ill.), Robert Coghill and his group are presently concerned more with increasing yields than with developing new strains of penicillin molds. They are still making penicillin G, still using phenylacetic acid derivatives. Currently, they are obtaining the derivatives from a by-product of Abbott's phenobarbital production, don't see any immediate major change.

- At Indianapolis, Eli Lilly researchers are looking for new and better penicillins along with different ways of helping molds build up standard penicillin G molecules.

* Precursors are compounds used by molds in building different (G, F, K, O, et. al.) penicillin molecules. Molds synthesize these compounds from the fermenting broth (generally corn steep liquor). One can also make these precursors in laboratories, and by adding them to the broth, can increase the relative yield of a desired penicillin; e.g., phenylacetic acid derivatives increase yield of benzyl (G) penicillin and allylmercaptomethyl acid derivatives augment penicillin O yield.

† Now research director for Abbott Laboratories, Coghill first discovered precursor effect in 1943 while with USDA Northern Regional Research Laboratory (Peoria, Ill.).

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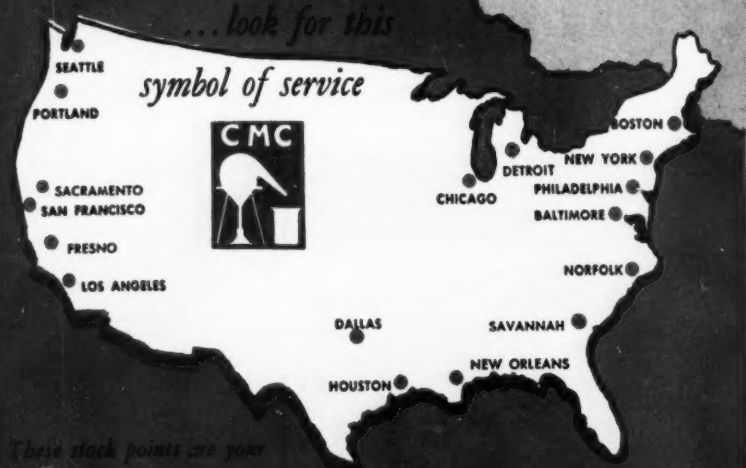
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RESEARCH

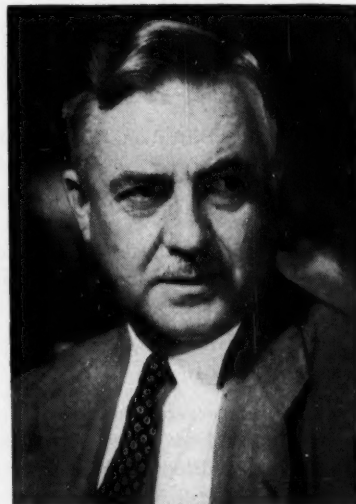
Content with phenyl derivatives as precursors for the benzyl part of the molecule, Lilly scientists are working on the three carbon (aminomalon-semialdehyde) and five carbon (α -amino- β -thioisovaleric acid) fragments.

Another angle Lilly isn't overlooking is possible precursor application to Ilotycin production.

- Bristol Laboratories (Syracuse, N.Y.), while experimenting with various phenyl derivatives on different penicillin molds, is more interested in precursors as they may apply to recently started streptomycin production.

- Similarly, Upjohn (Kalamazoo, Mich.), still carrying on development of penicillin O, is taking a long look at precursor possibilities for other antibiotics.

- Merck (Rahway, N.J.), too, continues its penicillin research, so far



ABBOTT'S COGHILL: He parlayed precursors into high returns.

hasn't come across anything more promising than penicillin G or the phenyl derivatives.

- Wyeth, Inc. (West Chester, Pa.), has strayed slightly from the fold. Recently awarded a patent on N-N-dibenzylethylenediaminediacetate as a procaine substitute, Wyeth workers are concentrating on other solubility decreaseers for penicillin that look even more promising. As for precursors, Wyeth is satisfied with the phenyl derivatives.

- Again somewhat afield, investigators at Pennsylvania State College are using radioactive carbon in an attempt to trace the chemical reactions by which molds synthesize penicillin from sugars in the fermentation broth. These studies could uncover informa-

Chessietown people "stay put"

That's why many Chessietown industries show records of low labor turnover that would be amazing to employers in other parts of the country. This conservatism and stability shows up in Chessietown's employment picture.

Take Harold, for instance. Harold still lives in the same house his grandfather built. Succeeding generations have added on and modernized it till the old folks wouldn't recognize anything except the view. And the old place, once far in the wilderness, is only a few minutes drive from the paper mill where Harold works as a mechanic.

A man with Harold's background doesn't take a job one day and start looking for another job the next. He believes in repaying fair treatment with loyalty. This human element is one of the many reasons why new industries have been locating along C & O lines at the rate of one every three days for the past several years. Other reasons are nearness to raw materials and quick deliveries to most of the nation's markets.

Let our industrial experts prepare a **PIN-POINT** survey showing just how these advantages would benefit your particular business. Write to Chesapeake and Ohio Railway, Industrial Development Department, Terminal Tower, Cleveland 1, Ohio. All information is accurate, confidential and adequately supported with photos, maps, aerial surveys and vital statistics.

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M.W. 167.1



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A light yellow crystalline solid, p-Nitrobenzoic acid Technical is soluble in aqueous caustic and slightly soluble in water. It may contain, as impurities, up to 0.5% p-Nitrotoluene, 0.5% ash, and 0.5% mineral acidity as sulfuric acid. Melting point is unreliable due to decomposition. p-Nitrobenzoic acid Technical is available in commercial quantities.

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p-Nitrobenzoic acid Technical is produced to these specifications: Purity . . . 98.0% minimum.
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You may find that p-Nitrobenzoic acid Technical is just what you need in the synthesis of antibiotics and other pharmaceuticals—or as an intermediate in the production of rubber chemicals and dyes. Derivatives of p-Nitrobenzoic acid Technical may be useful as pesticides.

DO YOU NEED A SPECIFIC INTERMEDIATE?

A WIDE VARIETY of chemical intermediates is now available from the Du Pont Organic Chemicals Department. It will pay you to investigate these products for your manufacturing processes.

A NEW INTERMEDIATE? We have the facilities to produce specific intermediates . . . perhaps one that will meet your exact requirements. Our technical men will be glad to study your problems and work with you in product development.

A REQUEST on your company letterhead will bring complete information. Just write to E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Department, Chemicals Division, Wilmington 98, Del.



BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY



CHEMICALS DEPARTMENT

RESEARCH

tion of value to other antibiotic work. A report will be made this summer.

Many more penicillin producers are also actively engaged in research in one aspect or another, feel that penicillin is far from giving up its ghost.

On all sides, the penicillin outlook seems brighter than it has in months. While no one is quite sure what answers this present research flurry will come up with, here is one event antibiotic producers can look for among future developments: successful application of precursor know-how to the newer antibiotics.

Stabilizer Supplement: Results of recent tests run by U.S. Dept. of Agriculture's Southern Regional Research Laboratory (New Orleans, La.) suggest the use of α - and β -conidendrol as supplements or replacements for coal-tar oxidation stabilizers, should the latter become scarce. Obtained as waste products during the pulping of western hemlock, the two new antioxidants do well as rancidity inhibitors in lard, fat-containing candies, cottonseed and peanut oils. They also stabilize synthetic rubber against aging and hardening, inhibit polymerization in some vinyl monomers. Toxicity studies are now under way.

Better Glow: A switch from radium to strontium-90 is in the offing for U.S. Navy luminous deck and personnel markers. Recently developed by United States Radium Corp. (New York), the new strontium markers, says the Navy, are brighter, less noxious and last longer.

Two Intermediates: Mann Research Laboratories, Inc. (New York) is now offering carbobenzoxy chloride (benzyl chloroformate) in commercial quantities.

Researchers, who have been making their own from phosgene, use the compound in the synthesis of peptides and peptide intermediates.

• Another new intermediate, 2-benzoyl thiophene, is the offering of Hendrey Chemical Co. (Evanston, Ill.). Still undergoing development studies, the compound is suggested for use as an organic and pharmaceutical intermediate.

Hot or Soft: Water-softening ion-exchange resins serve as fire-retardant coatings for fabrics, paper and wood, avers Albi Manufacturing Co.'s (New York) new patents (U.S. 2,628,946). The coatings are produced by the reaction of basic, nitrogen-containing anion-exchange resins with nonoxidizing inorganic acids.

Hooker Chemical Guide (ONE OF A SERIES)

USE this handy reference to save time
in selecting high quality chemicals.

HOOKER Chlorinating Agents

CHLORINE

Symbol: Cl_2

Appearance: Greenish-yellow gas at ordinary temperatures, amber liquid when under pressure

Molecular Weight: 70.9

TYPICAL PROPERTIES

Freezing Point -100.98°C
Boiling Point -34.5°C
Specific Gravity, Gas at 0°C (Air=1) 2.49
Liquid at 20°C (Water=1) 1.41

USES

Bleaching pulp and paper, water purification, sewage treatment, general germicide and deodorant. Manufacture of organic and inorganic chemicals; and many other uses.

MURIATIC ACID

Appearance: Hooker White Grade—Colorless
Commercial Grade—Light yellow

TYPICAL PROPERTIES

Specific Gravity, $15.5^\circ/15.5^\circ\text{C}$ 18°Be 1.1417
..... 20°Be 1.1600
..... 22°Be 1.1789

USES

In manufacture of dyestuffs; refining ores, pickling and cleaning metals; manufacture of foodstuffs and pharmaceuticals; in textile dyeing and finishing; in general chemical manufacture.

SULFUR MONOCHLORIDE

Formula: S_2Cl_2

Appearance: Yellow to slightly reddish heavy liquid

Molecular Weight: 135.0

TYPICAL PROPERTIES

Last Crystal Point -80°C
Boiling Point 138°C
Specific Gravity, $15.5^\circ/15.5^\circ\text{C}$ 1.6885

USES

Chlorinating agent: for organic chemicals, rubber substitutes, etc.; polymerization catalyst; reagent in manufacture of military gases, insecticides, chemical intermediates, phenolic resins, other chemicals; solvent for sulfur.

SULFUR DICHLORIDE

Formula: SCl_2

Appearance: Brownish-red liquid

Molecular Weight: 103.0

TYPICAL PROPERTIES

Last Crystal Point -78°C
Specific Gravity, $15.5^\circ/15.5^\circ\text{C}$ 1.638

USES

Special chlorinating agent and chloridizing agent in metallurgy; reagent in: the manufacture of organic acid anhydrides, organic chemicals, insecticides, rubber cements, rubber substitutes, treatment of drying oils for varnishes; drying agent for coatings of ink, paint or varnish; as a replacement for sulfur monochloride where higher chlorine content is desired.

SULFURYL CHLORIDE

Synonym: Sulfuric Oxychloride

Formula: SO_2Cl_2

Appearance: Light yellow liquid

Molecular Weight: 135.0

TYPICAL PROPERTIES

Pour Point below -54°C
Distillation Range 2° including 69.5°C
Specific Gravity, $15.5^\circ/15.5^\circ\text{C}$ 1.680
 SO_2Cl_2 Content 99%

USES

Chlorinating agent: for the production of chlorophenol, chlorothymol, pharmaceuticals, dyestuffs; reacts with sodium salts of organic acids to form chlorides and anhydrides.

THIONYL CHLORIDE

Synonym: Sulfurous Oxychloride

Formula: SOCl_2

Appearance: Clear, pale yellow to red liquid

Molecular Weight: 119.0

TYPICAL PROPERTIES

Pour Point below -75°C
Distillation Range High Grade 75° to 78°C
..... Tech. Grade 72° to 79°C
Specific Gravity, $15.5^\circ/15.5^\circ\text{C}$ 1.640
 SOCl_2 Content High Grade 98%
..... Tech. Grade 95%

USES

Chlorinating agent: to replace various groups with chlorine to form acid chlorides and anhydrides. Among end products are: isoamyl chloride, synthetic pyrethrum, phenyl propyl chloride and synthetic vitamin A palmitate; antihistamines.

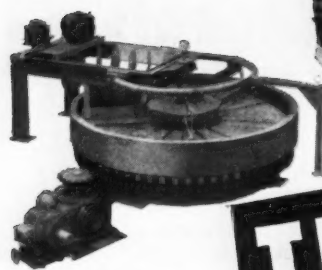
For detailed information on items listed, drop us a note on your letterhead. Address your request to HOOKER ELECTRO-CHEMICAL COMPANY, 3 Forty-Seventh St., Niagara Falls, N. Y.

From the Salt of the Earth

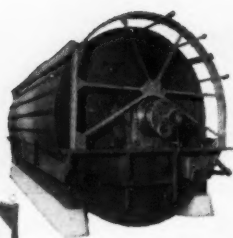
HOOKER ELECTROCHEMICAL COMPANY

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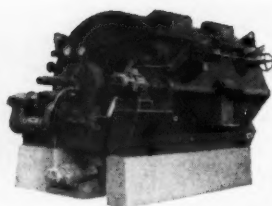




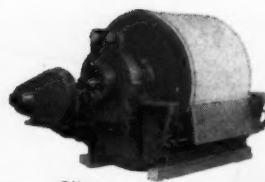
Oliver Horizontal
Rotary



Oliver Panel

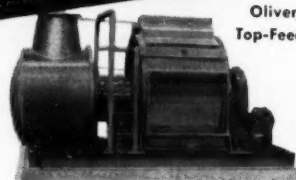


Oliver Precoat
(Vacuum)



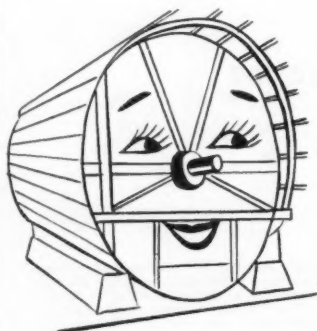
Oliver
Chemical

THAT FILTER YOU



Oliver
Top-Feed

at Oliver United



- * HERE ^{at Oliver} you will have the guidance of a large staff of skilled filtration engineers backed by a company with 45 years of filtration experience and serving every phase of industry requiring filtration all over the world.
- * HERE the filter you need will be selected not from one or two types only—but from nearly a score of distinctly different filter types covering the three principles of filtration: continuous vacuum, continuous pressure, and batch pressure.

Just because it can be assumed that all types of filters will separate solids from liquids, it doesn't follow that all types will make that separation with anything like equal efficiency. Nor will all filters wash the cake properly although washing can be carried on with all filters.

Granting this, isn't it just good common sense to obtain the best filtration advice you can get and to make the filter selection from as broad a group of filter types as possible?

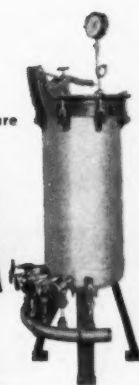
Here, briefly, is what you can get at Oliver United: an experience that began in 1907 in the gold mining districts of California where a revolutionary filtration and cake

washing method was introduced and proved sound . . . an experience that has grown in the past 45 years to cover every processing operation requiring filtration . . . an experience that has gained strength by world-wide filtration service. The other answer to your problem lies in the wide range of Oliver United filter types . . . nearly a score! Check the list at the right and you will see what we mean.

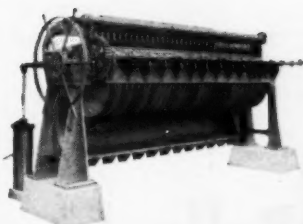
The filtration step in your process is always a most important step. Can you afford not to obtain the best filtration guidance available and the assurance that the filter you buy will be the filter you need?

NEED

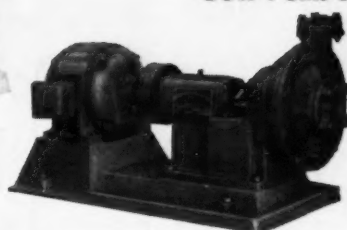
Oliver Pressure



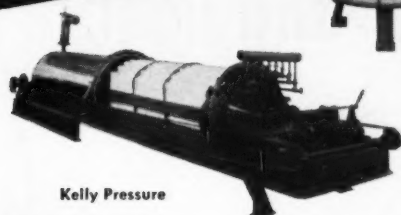
Sweetland Pressure



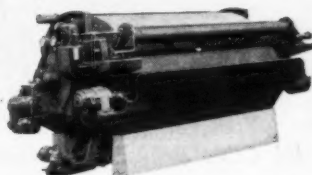
**AND DON'T FORGET
OUR PUMPS**



Olivite
Acid-Handling



Kelly Pressure



Oliver Precoat
(Open)



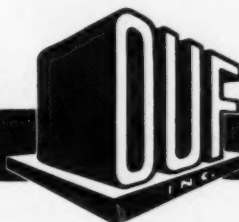
O-D-S
Diaphragm
Slurry

OLIVER UNITED SELECTIVITY Study These Variations in Oliver United Filter Types with Relation to Your Problem. They Provide a Selectivity Unmatched in Filtration Circles.

Filtration Principle	Filter Type	Selected Distinctive Feature	Filtration Principle	Filter Type	Selected Distinctive Feature
Continuous Vacuum	Oliver Chemical	standard for the industry, particularly excellent cake washing	Continuous Pressure	Dorrco	ideal for dewatering heavy, fast-setting solids
	Oliver Precoat Open	handles thin slimy cakes (cake discarded)		Oliver	same characteristics as standard continuous vacuum Oliver but operable under pressures higher than vacuum equivalent
	Oliver Precoat Hooded	same as above but prevents escape of noxious fumes and gases	Batch Pressure	Oliver Precoat	similar to Vapor Tight Precoat Filter, operable under pressures higher than vacuum equivalent
	Oliver Precoat Vapor Tight	same as above but seals in dangerous fumes and gases		Sweetland	industry's standard pressure filter, offering high flexibility in leaf type and spacing; pressures up to 50 pounds
	Oliver Panel	handles thin, slimy sticky cakes (no precoat, cake can be retained)		Kelly	used in very high pressure work and where jacketing is required for abnormal temperatures
	Oliver String	for certain kinds of thin, hard-to-handle filter cakes		Kelly Sulphur	modification of the standard Kelly for cleaning molten Sulphur
	Oliver Top Feed	excellent where bone-dry or near-dry cake is required		Oliver Pressure	excellent clarifier for polishing beverages, fruit juices, etc.
	Oliver Dewaxing	vapor-tight design for low temperature solvent dewaxing of lube oils		Oliver Beatty	use similar to that of Oliver Pressure leaves set radially around a rotatable shaft
	Oliver Horizontal	high capacity and excellent washing of crystalline or fibrous materials with high visibility of operations			
	American Disc	excellent dewaterer with highest capacity per floor space of any filter			

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As part of Continental's Tailor-Made Package Service, we make these drums in 17 eye-catching colors. We reproduce names and trademarks in any of 14 different inks.

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PRODUCTION . . .



Quest for Record . . .

Rogers City is a port town on Lake Huron in Northern Michigan. Having a population of 4,400, it is like many small U.S. cities. But it's unique in at least one respect, for it's the site of the world's biggest limestone-producing quarry. There, on an 18,000-acre tract, Michigan Limestone & Chemical Co. (a division of U.S. Steel) processes the stone at a rate of 4,000 tons/hour.

Last week the CW CAMERA visited the Rogers City plant, found that in spite of an unseasonable snow storm, spring production had just got under way.

Limestone has been mined at the area since 1911 (since 1920 by U.S. Steel). This year, however, the firm is shooting for a record-breaking 17 million tons. About 20% of that will go to chemical firms.

Three Layers: Reserves at the site are enough to last 150 years at the present rate of consumption. After overburden of sand and gravel (which varies in depth between 1 and 30 ft.), there are three strata of limestone. The top one runs from 60 to 80 ft., the second from 5 to 8 ft. The latter is dolomite-rich in magnesium—and until recently has been



AFTER BLASTING TO LOOSEN IT, the limestone is loaded by electric shovels, moved by rail from the quarry to the stamp mill . . .



WHERE OVERSIZED stones are crushed to pieces no bigger than 5x11 in.

UNIQUE APPLICATIONS for New Additive WAX.....

★ In Plastics

280 Wax gives excellent lubrication for calendaring and extrusion operations on plastics. When 1/2% to 1% 280 Wax is incorporated in polyvinyls or other plastics, the lubricating effect of this trace of 280 Wax greatly improves the surface finish of calendared and extruded plastic materials. The finished plastics are completely free from any tendency to bloom.

★ In Electrical Dipping Waxes

Electrical Dipping and potting blends must have good insulating properties and a high melting point. Since 280 Wax elevates the melting point of an inexpensive, low melting point compound, it gives condensers and transformers a stability in extreme operations at low cost.

★ In Textile Waterproofing

280 Wax has total repency to water and salt water. This property makes it extremely desirable in waterproofing compounds used for treating duck, canvas, and other fabrics.

★ As Chemical Protection

Besides being repellent to water and salt water, 280 Wax is also resistant to practically all solvents, acids, and alkalis. This makes it a valuable additive for storage battery cases, moldings, chemical tank linings, cable covers, and "baked on" insulating varnishes.

AN EXCELLENT SUBSTITUTE OR EXTENDER FOR CARNAUBA WAX.

★ In Mold Release Compound

In this application, 280 Wax equals or betters Carnauba Wax at much less cost. More pieces may be molded per application of the compound—there is no surface effect on the molded piece—it also possesses good anti-blocking properties.

★ In Floor Polishes and Car Polishes

While 280 Wax cannot be used as a substitute for Carnauba Wax in floor and car polishes because it does not have the exact desired qualities, it is a valuable extender due to its hard nature and light color. One third of the cost can be saved on either of these applications by the use of 280 Wax.

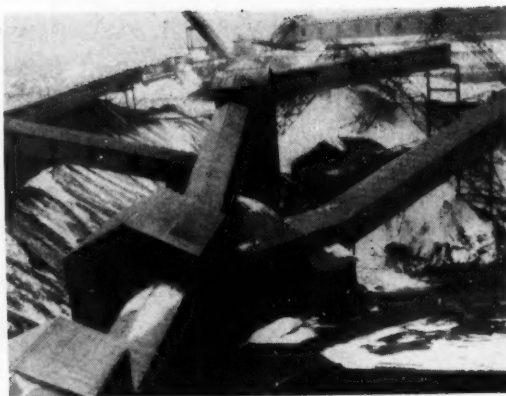
- More facts will be sent if you desire.



**CARLISLE
CHEMICAL
WORKS, INC.**
READING 15, OHIO

PRODUCTION.

... Puts
Limestone
In the
Limelight



ON A CONVEYOR BELT SYSTEM 7½ miles in length, the stone is transferred to the screening house . . .



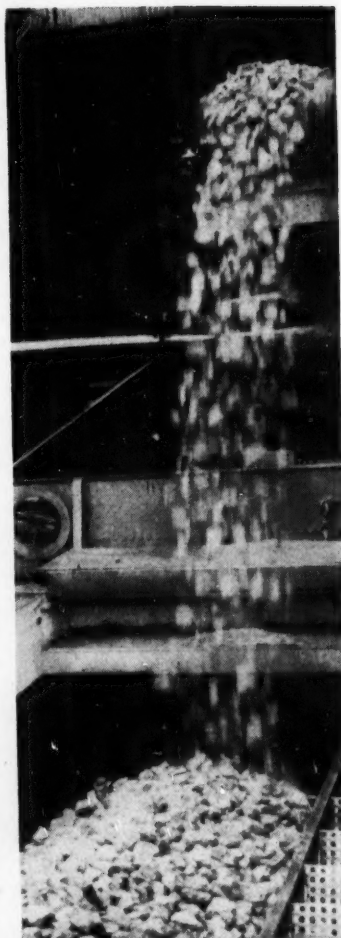
WHICH PROCESSES IT at the rate of 4,000 tons/hour.

regarded as waste. Steel companies, however, discovered it's an excellent hardening agent for slag, and demand for it is growing. The third stratum averages 150 ft. in thickness. Though it's similar in chemical composition to the top layer, it has never been mined extensively because the more accessible top layer is still abundant.

At the quarry, stripping is done during the winter months, but actual production doesn't start until spring. Then the stone is loosened by blasting in a hole that runs 2 to 3 ft. into the second stratum. Eight electric shovels, each with 20-cu.-yd. buckets, load it onto rail cars for removal to the stamp mill.

At the mill, oversized pieces are reduced to a maximum of 5x11 in. From there, it enters the plant's intricate conveyor system that totals 7½ miles in length. Belts carry the stone to the 12th story of the 15-story screening plant.

There it's washed, moved over eight jig screens and sorted. The firm processes



FINALLY, it's loaded into one of the firm's seven lake carriers.



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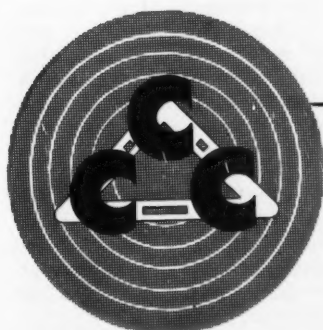
CALDWELL handles a complete line of organic and inorganic chemicals and maintains a technical service department to work with you on your problems.

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PRODUCTION

eight sizes, five of which are used by chemical companies. Each size is conveyed to outside storage heaps. It then drops through a hole in the roof of a tunnel onto the conveyor belt that carries it to the dock for loading.

The loading machinery moves horizontally to enable even loading of vessels with a 72 ft. beam. It takes 5 to 8 hours (depending upon size) to load 20,000 tons, about the same time to unload it.

Although about 100,000 tons will be shipped from the plant by rail, most of it leaves by lake carrier. The firm, in fact, has its own fleet of seven ships that carries half the output; the rest is moved by contract freighters.

Cost of the limestone at the plant is about 79¢/ton, averages over \$2/ton delivered at a Lake Erie port. Principal chemical customers are Solvay (Detroit), Diamond Alkali (Painesville, O.) and Columbia (Barberton, O.).

Michigan Chemical & Limestone operates its own steam power plant. It provides enough power for all the company's operation and enough to wholesale power to a private company, which retails it to residents of Rogers City.

Production is so highly mechanized that only 35 men per shift are needed (excluding those working in the quarry and those required for maintenance and transport of equipment). An oddity about the company: aside from engineers, it hires no one with special skills, allows the men to improve themselves by education and training on the job.

EQUIPMENT

Spiral Spray: Bete Fog Nozzle, Inc. (Greenfield, Mass.) has just developed two new fog nozzles for 1½ in. hose. The G-10, for inside fire fighting, and the G-15, for general fire fighting, both use a spiral fog tip and can be converted to a straight stream.

Lignite Report: Thermal data on the gasification of lignite is now available from the Bureau of Mines, Publications Distribution Section, 4800 Forbes St., Pittsburgh 13, Pa. Report 4957 correlates and reviews data obtained since 1945 from the Bureau's lignite gasification plant in Grand Forks, N.D.

Redesigned: Denver Equipment Co. (Denver, Colo.) declares it has newly improved its automatic sampler and convertible ball rod mill. Now featured are simplified wiring circuits and ease of repair.



The United States Testing Company, Inc., well known in the field of testing and research, is now becoming recognized as a manufacturer of instruments and special testing apparatus.

Many of the instruments we have developed and built for our own use have been accepted as standard by various industries. In addition, we have developed, designed, and manufactured special testing equipment and instruments for industries, trade associations, and technical groups.

For example: we are now manufacturing the low temperature Impact Tester for vinyl plastic film, required for the new proposed Commercial Standard TS-5165. It is also used in the standard test methods of the Plastic Coatings and Film Association.

This tester has been built in our own instrument shops to our own exacting standards and is designed for long, reliable service and ease of operation. A special release mechanism assures uniformity in use by different technicians. A case is furnished.

We invite inquiries on standard testing equipment and on instruments built on a production or custom basis.

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PRODUCTION

Electric Power Checklist

If you answer yes to these questions, you should look kindly at private generation:

- ☐ Do you operate a process that cannot be shut down unexpectedly for any reason?
- ☐ Is there a lack of sufficient power in your area or are there poor facilities for transmission or distribution?
- ☐ Are you a producer who has large (100,000 kw. or more) power requirements? If so, and if you can amortize over long (20 years or more) periods, you may compete favorably with local public utility.
- ☐ Do you have assured amounts of water power available or do you have cheap by-product fuels—like natural gas or coal?
- ☐ Do you have large requirements for low-pressure process steam that make back-pressure electric generation economically desirable?

But you can't afford to overlook these disadvantages:

- Small condenser generating plants cannot compete with large central stations.
- Private generating stations require a larger operating force per kw. of capacity than total crews for utility generation, transformation, transmission and distribution.
- You may find yourself with labor problems in a field not directly connected with the products you're manufacturing.
- Rapidly expanding plants may find they cannot erect generating capacity at the same rate their product capacity grows.
- When process steam requirements are small compared with total electric power needs, low-pressure boilers and purchased power are economically justified.

ARE YOU better off buying electric power or generating your own? It's an age-old question that doesn't lend itself to a generalized answer. But at the 19th Annual Sales Conference of the Edison Electrical Inst. (at the Edgewater Beach Hotel, Chicago) last fortnight, H. Carl Bauman, as-

sistant head of the Utilities Div. of Chemical Construction Corp., quoted statistics, did some mental bookkeeping on some theoretical companies, laid down ground rules that may help to answer the question for any given case.

Using the Federal Power Commis-

Chemical Week • April 18, 1953

... ..

sion's listing of industrial categories, Bauman points out that three sections of the chemical process industries—Chemical and Allied Products, Paper and Allied Products, Petroleum and Coal Products—accounted for 80% of the power consumed by the entire process industry, 30% of that consumed by all industry in 1946. And he figures that those percentages are even higher today.

By extrapolating curves, Bauman figures that the Chemical and Allied Products segment will require 44 billion kwhr. by the end of 1953. Of that, 28 billion will be bought, 16 billion will be privately generated. He also cites figures by reliable authorities to prove that output of the process industries is slated for a whopping increase, and estimates that power requirements will be roughly parallel.

One significant point brought out by Bauman is that capital required for a generating plant may be used to earn a higher rate of return. Earnings of public utilities, for instance, are fixed (by public utilities commission) at 6%, whereas many industries are earning two or three times that much.

In one of his examples, Bauman took a company requiring 85,450 lbs. of steam per hour for process heat, 4,500 kw. in electric drives, and 750 hp. of mechanical refrigeration. If the company generates its own steam but buys power, the total investment will be \$690,000; by generating its own power, the investment rises to \$1.44 million. On a 10% depreciation, the return on added investment amounts to 3.1%. This would have to be considerably higher before it would be attractive to a chemical company.



H. C. BAUMAN: A partial answer.

FOR THE MAN WHO WANTS

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6th Annual Du Pont Study Shows

3 OUT OF 4 DEALERS NOW

Substantial Gain Over Previous Year's Report

For the sixth consecutive year (according to the latest Du Pont survey of the market), there has been a substantial increase in the number of retail dealers stocking pressure-packed aerosol products. Today . . . 3 out of every 4 retailers interviewed carry one or more aerosols in stock!

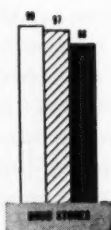


The survey . . . conducted in July 1952 . . . was more extensive than earlier studies. It presents opinions and reactions obtained by interviewers in a total of 2,233 retail outlets in 60 cities throughout the United States. Interviews took place

in stores of six major classifications of trade: department stores, drug, hardware, food, variety or 5 & 10¢ stores, and automobile supply stores and service stations.

STORE SIZE CONSIDERED

An innovation of the survey is the tabulation of results by store size: large, medium and small. This permits an even closer analysis of retail outlets. It compares percentage of various types of aerosol products stocked in stores of the three sizes. Differences are important. For example: 89% of large grocery stores stock aerosols, whereas only 45% of the small grocery stores reported that they carry aerosols in stock. However, as the chart above shows, there appears to be good distribution of aerosol products in drug stores regardless of store size.



REASON FOR STOCKING AEROSOLS

To determine why dealers stock aerosols, interviewers asked them for their opinion of the aerosol method of dispensing compared with other methods. In hardware stores, 81% informed interviewers that they believe aerosols are better. In both department and drug stores, 75% gave a similar reply. Asked why they considered aerosols better, dealers listed the following eight main reasons:

Easier to use	42%
More convenient	25%
Not greasy or messy	18%
Works well, effective, better	11%
Faster to use	11%
Better control	8%
No waste	6%
More economical	5%

TREND TOWARD AEROSOL PACKAGING CONTINUES

The study shows that there has been a consistent increase in the kinds and types of aerosol products carried in stock by retailers. Although insecticidal aerosols still lead the parade in all classifications of trade, many other pressure-packed products have appeared on the market and are steadily gaining in distribution. To illustrate, the chart below shows the pattern for room deodorants in the six categories studied:

% OF DEALERS WHO STOCK AEROSOL ROOM DEODORANTS																	
Dept. Stores			Drug Stores			Grocery Stores			Hardware Stores			Variety			Auto Supply		
L	M	S	L	M	S	L	M	S	L	M	S	L	M	S	L	M	S
68	46	*	87	77	86	53	49	37	51	46	43	37	48	34	8	6	10

*Only 1 small department store stocked aerosols, so no data is shown because sample is too small. L=Large M=Medium S=Small.



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FREE DIGEST OF THE STUDY



Because the survey is of timely interest and value to manufacturers of a wide variety of products, highlights have been published in a 20-page digest entitled: "The Aerosol Market." Tabulations of the nationwide findings can serve as a guide in considering and evaluating this

rapidly expanding market. If you would like a copy of the digest, please request it on your company letterhead.

IMPORTANCE OF DEPENDABLE PROPELLENTS

Ever since introduction of aerosols in the form of "bug bombs" used by our troops when they were in the tropics during World War II, the success of pressure packaging has depended upon the inert propellant used to dispense active ingredients of the product.

Just as wartime insecticidal aerosols were propelled by a "Freon" propellant...so also are the vast majority of aerosol products on the market today. There is good reason why.

"Freon" propellents are of the finest quality obtainable. They are scientifically made by intricate, laboratory-controlled methods of manufacture. Care and precision are production essentials that insure the degree of purity and uniformity for which these propellents are known. "Freon" propellents are safe...non-flammable, nonexplosive, virtually nontoxic, and their extreme dryness (maximum moisture content: 15 ppm for "Freon-12"—"Freon-11" solutions) further insures the satisfactory performance of modern, pressure-packed containers.

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Various formulations of "Freon" propellents have been designed to meet the specific requirements of different types of ingredients used in space sprays, residual sprays and foam products. To help formulate a "Freon" propellant suitable for dispensing your product by the aerosol method, technical advice and assistance is gladly offered upon request. By working closely with your chemists and physicists, a correct, economical and effective propellant formula can readily be designed to meet your specific needs. Address: E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.

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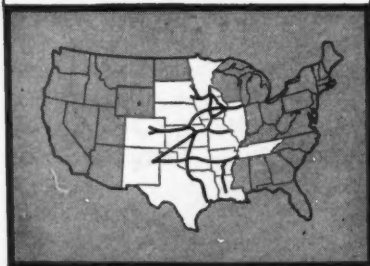
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DUTCH FERTILIZER: The Mekog nitrogen works at Ymuiden, Holland . . .

An Import Icing

The Netherlands' exports of nitrogenous fertilizers bring \$10 millions of foreign exchange into the Lowlands.

But the exclusive importer, Bradley & Baker, still considers itself to be primarily a domestic company.

Rarely does a chemical company find itself at the dead center of a municipal hurricane. And even more rarely do the black headlines spell out the name of a chemical distributor.

But those are the double bolts of lightning that struck the fertilizer-handling firm of Bradley & Baker. It was the "New York agent" that acted the unhappy role of innocent bystander while New Orleans' mayor and safety commissioner slugged out the question of unloading nitrate within the port area (CW, March 7).

That Bradley & Baker should be the particular company involved in this nitrate fracas is understandable. B&B is responsible for almost half of all the nitrogen fertilizer imported into this country from western Europe. It

is the sole selling agent in the U.S. for exports of the Netherlands nitrogenous fertilizer industry. And this week it is at the peak of its 1952-'53 season, predictably the most active one experienced in the 23 years the company has been handling Dutch materials.

With ammonium nitrate in critically short supply, it is also predictable that the company will have no trouble selling all of the "Nitrolime" variety it can unload at East Coast and Gulf ports.

F&F: Despite its predominant position on nitrogen imports, however, Bradley & Baker considers that it is essentially a domestic firm. "Our nitrogen imports are the frosting on the cake," remarks a top B&B official.



... are part of the frosting for the Bakers of Bradley & Baker.

... on the Cake

The cake itself: acting as a versatile sales agent for producers of materials going to fertilizer and feed makers.

And in this broad marketing field, B&B has carved its own special niche by becoming expert in the adaptation of waste or by-product materials to fertilizer or feed uses. It thus acts as a middleman in both the commercial and technological sense.

One of its big accounts is, for instance, the Minute Maid Corp. The sale of processed citrus waste pulp to the animal feed industry is now a multimillion-dollar business. Similarly, the makers of such products as penicillin, sulfite pulp, whiskey, soap, beer, leather and sugar are finding that it is easier to let an agricultural specialist market those wastes or by-products that have farm uses. To foster the development of additional materials that could fit this classification, B&B carries on research work at Milwaukee, Wis.

But the company's activities have not always been so primarily in the agricultural area. When Albert B. Baker and W. L. Bradley first formed their partnership in 1924 (Albert B. Baker, Jr., is now a third partner), the new firm was self-styled as a general dealer in industrial chemicals.

With Limestone: Yet from the start, farm chemicals have had their part. The Dutch nitrogen imports date back to the beginning, and in this relationship, B&B has always had a particularly stable position. In a typically European fashion, all of the basic Dutch nitrogen manufacturers are banded together in the Centraal Stikstof Verkoopkantoor N.V. (Central Nitrogen Sales Office) with headquarters in The Hague. And this is the organization with which B&B has its exclusive American-agency contract.

Total Dutch production of fertilizer nitrogen will this year reach an estimated 250,000 tons of N_2 . And nearly 80% of this will be in the form of Nitrolime, which contains 20.5% nitrogen. The growth of this form in the Netherlands has practically elimi-

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Sodium Perborate
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DISTRIBUTION

nated Dutch imports of Chilean nitrate (which accounted for 83% of the market in 1923), thus changing the country from a nitrogen-importing to a nitrogen-exporting status. For the same reason, the Nitrolime form accounts for most of the Dutch nitrogen brought into this country by B&B.

And that's why occurrences such as the New Orleans squabble are so frustrating. Nitrolime is anything but explosive. It is made by mixing finely ground limestone with a solution of ammonium nitrate, followed by evaporation, drying and granulating. A similar product is made in this country by the Nitrogen Div. of Allied Chemical and Dye at Hopewell, Va.

Bradley and Baker's imports—running at the rate of over 175,000 tons/year—are either bagged in Holland (in multiwall paper sacks) or brought over in bulk for bagging at

Wilmington, N.C.; Savannah, Ga.; or Gulfport, Miss. The material is then shipped to fertilizer mixers or dealers for farm distribution. Nitrolime, like ammonium nitrate, is a "direct application" nitrogen source, and is rarely used with other plant nutrients in compounding fertilizer mixtures.

With no duty to worry about, B&B attempts to keep its Nitrolime price competitive with the American market. The biggest cost variable: trans-Atlantic freight rates. These have varied—in the past few years—from a high of \$17/ton down to today's \$3-\$4/ton figure.

For Holland, B&B's activities mean approximately a \$10-million foreign exchange boost. And for ammonium nitrate-short American farmers, the imports mean a welcome relief. So long as the latter condition exists, it is hard to see how anybody can lose.



BERT SOUTHERN: From Monsanto salesman to MTD vice-president.

Trans-Atlantic Echoes

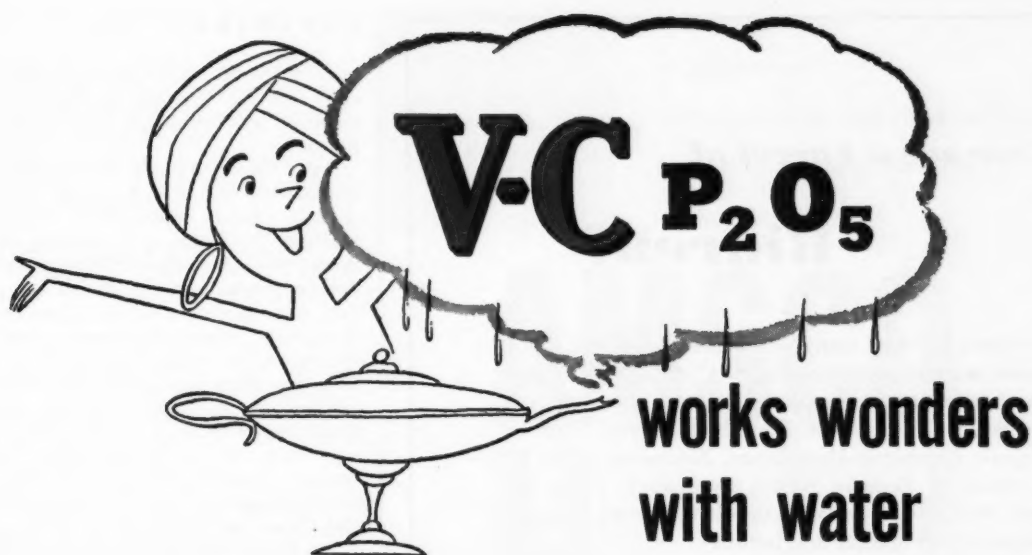
For U.S. buyers of ADF (American Duty-Free) cresylic acids, this is a month of change. One major long-time supplier is going out of the business, to be replaced overnight by a new company with an equally British accent.

The news is a natural sequel to last fall's prediction (CW, Sept. 13) that Monsanto Chemicals, Ltd., of London, would soon be able to greatly increase its exports of cresylic products. But the builder of the new capacity wasn't Monsanto itself; instead, it was that firm's crude-tar-acid supplier, Midland Tar Distillers, Ltd. And MTD's

decision to handle its own exports to the U. S. is the key to today's changes.

As a first step, Monsanto Ltd. has dissolved its one-man American sales force, placing all of its noncresylic sales into the hands of the Riches Nelson Co., a New York import-export house. But the ex-Monsanto salesman, H. E. "Bert" Southern, was unemployed only momentarily. His new position: vice-president of the newly formed U. S. firm, Midland Tar Distillers, Inc.

What's more, he will still operate out of rented space in Monsanto's handsome New York quarters. Cresylic



Whether you are manufacturing cleansers or water softeners, processing textiles or cheese, dispersing clay or treating boiler water, it will pay you to investigate the advantages of V-C Sodium Phosphates. Their water-softening ability, emulsification and dispersion properties and free-rinsing quality over a wide range of uses are outstanding. Examine the individual characteristics of each V-C Sodium Phosphate, outlined below, then write for full details.

V-C DSP (Disodium Phosphate) Anhydrous

Specifications: Minimum P_2O_5 content is 48.0%; less than 2% moisture. The pH of a 1% DSP solution is 9.0.

Physical Properties: Small white flakes, readily soluble giving a clear solution.

Characteristics: Mild alkalinity, emulsifies fats and oils, "deflocculates" or suspends solids, is a good buffer.

Advantages: Anhydrous DSP contains no water of crystallization as does the dihydrate DSP or crystalline (12 H_2O) DSP. Very economical, less alkaline than TSP, excellent water softener.

Uses: Boiler water treatment to control caustic embrittlement, textile cleaning, manual cleansers, plasticizer in the manufacture of processed cheese, and many other uses.

V-C TSP (Trisodium Phosphate)

Specifications: Surpasses requirements of Federal Specification O-T-671a and ASTM Specification D538-44. P_2O_5 content is 18.5%. The pH of a 1% TSP solution is 11.8.

Physical Properties: Easily soluble white crystals.

Characteristics: Readily emulsifies fats and oils, softens water, "deflocculates" or suspends solids, rinses clear.

Advantages: Has higher alkalinity than DSP or polyphosphates. Good water softener. Economical.

Uses: For manufacture of cleansers, cleaning compounds, soaps and water softeners. Also for metal cleaning, boiler water treatment, textile processing, and other uses.

V-C STPP (Sodium Tripolyphosphate) Anhydrous

Specifications: Minimum P_2O_5 content is 57%; less than 1% moisture; calcium value, 10. The pH of a 1% STPP solution is 9.8.

Physical Properties: Anhydrous white powder (finer than 20-mesh), soluble in water.

Characteristics: Mild alkalinity, good sequestering agent, very effective peptizing agent, fairly stable.

Advantages: Greater sequestering power than TSPP. Cheaper than organic sequestrants. More stable than other polyphosphates except TSPP.

Uses: Builder for synthetic detergents and soaps, boiler feedwater treatment, industrial cleansers, textile processing, paper manufacturing, clay dispersing and many other uses.

V-C TSPP (Tetrasodium Pyrophosphate) Anhydrous

Specifications: Minimum P_2O_5 content is 53%; less than 1% moisture; 98.0% $Na_2P_2O_7$. The pH of a 1% solution is 10.2.

Physical Properties: Anhydrous white powder (finer than 20-mesh), soluble in water.

Characteristics: Exceptional water softening ability, high emulsification and dispersion properties, mild alkalinity, good buffering and rinsing properties, very stable.

Advantages: More stable than other polyphosphates. More economical than organic sequestrants and other polyphosphates.

Uses: Builder for synthetic detergents and soaps, mud treatment, water treatment, textile processing, industrial cleansers, cheese manufacture, cold water paints and other uses.

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Sodium Tripolyphosphate
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DISTRIBUTION . . .

price schedules, contracts and deliveries will be unchanged. Only the name on the letterheads will be different.

Tune Caller: Against their English backdrop, these American-side changes make considerable sense. Midland Tar Distillers is—in terms of throughput—the largest processor of coal-tar products in the British Isles. The only exception to its otherwise completely integrated processes was the separation and purification of the tar acids. This had historically been handled by Monsanto Ltd. and its predecessor firm. In fact, when Monsanto took over its present plant at Ruabon, North Wales, in 1920, this was its major activity—in equipment that dated, in part, back to 1875.

But the pressure of British industrial growth upset the balance of this amicable arrangement. Without America's vast store of natural gas, England has steadily had to expand its coal-based gas industry. And one inviolate rule of British chemical commerce is that the tar processors must automatically take all of the crude tars offered to them by the scattered gas works.

Unable to expand in a logical fashion during the war years, Midland Tar Distillers found itself—in the post-war period—depending on worn-out equipment that was sadly below the capacity needed to handle the tars available. Rather than patch up the existing plant, MTD elected to start from the ground up on a 100-acre plot 16 miles from its central works at Oldbury.

The new capacity thus initiated meant additional crude acids for Monsanto to process. But the latter's chemical operations by now had been extensively diversified, and the company finally decided to drop out of the acid refining business completely, rather than to expand those facilities.

As a result, Monsanto engineers worked closely with MTD planners in developing what is claimed to be the largest coal-tar phenol and cresylic acid plant in the world. Now nearly completed, the new installation has a capacity—for ADF acids alone—of over 1 million gal./year.

In T/Cs: With a third to a half of the American cresylic acid market regularly supplied by imported material—a large part of it from England—it is only natural that the MTD officials are hopefully watching Southern's American sales activities. They'll soon have more than enough acid to sell.

Symptomatic is the fact that in June imported cresylic acid will be available to American customers in tank-car shipments from bulk storage tanks. At first this will be accom-

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DISTRIBUTION. . . .

plished by transferring the material from drums to tank inventory at a New Jersey location, but bulk water shipments are being planned.

When this happens, the cresylic-acid changes will have gone beyond just a switch of names.

West Coast Changes

Changes in West Coast distribution patterns have made this recent news:

- Two Koppers Co. divisions are sharing new sales offices on Wilshire Blvd. in Los Angeles, Calif. They will represent the company's western district for the Chemical Div. and the Tar Products Div.

- In a similar move, Union Carbide & Carbon Corp. has established Seattle, Wash., quarters for its Carbide & Carbon Chemicals, Linde Air Products, National Carbon, and Haynes Stellite divisions.

- Permutit Co. (New York) has moved its Los Angeles sales office to a new location on South Brand Blvd., Glendale, Calif.

- Schwartz Chemical Co. (New York) has appointed Plastic Materials Supply Co. (Temple City, Calif.) as its West Coast distributor.

Utah Purchase: The Salt Lake City firm, Allied Supply Co., was bought by San Francisco's Braun-Knecht-Heimann.

Pittsburgh Dyes: To market dyestuffs in Pennsylvania, New Jersey, Delaware, Maryland and Virginia, the Fine Chemicals Div. of Pittsburgh Coke & Chemical Co. opened a new sales office near Philadelphia—at Bala-Cynwyd, Pa.

Ohio Agent: Acme-Hardesty Co. (New York) appointed Cleveland's Hukill Chemical Corp. as its northern Ohio agent for the sale of fatty acids, hydrogenated oils and glycerine.

New England Tanning: The Chemical Div. of Marathon Corp. established a Maratan tanning agent warehouse stock at Nashua, N.H., in order to lower the delivered cost to lcl buyers in the New England area.

New Jersey Terminal: Newark's Lehigh Warehouse & Transportation Co. entered into a contract with Dow Chemical Co. for the chemical firm's use of a 3¼ million gal. tank storage terminal to be built this summer at Bayonne, N.J. The new facility will be known as the Lehigh Tank Terminal, will redistribute chemicals brought in by Dow's sea-going tanker, the "Marine Chemist."

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A reduction of 12%-14% in the prices of some of the Rohm & Haas acrylic monomers became effective February 1. The prices of ethyl acrylate and methyl acrylate were reduced from 48c and 49c respectively to 42c per pound in tank cars. This reduction is the direct result of production economies made possible by an 8-million-dollar addition to the Rohm & Haas plant at Houston, Texas. The new unit was designed to manufacture these monomers by a completely new, patent-protected process, involving, as starting materials, carbon monoxide, acetylene and an alcohol. This new plant and process are the latest developments in more than 20 years of continuous developments in acrylics.

The outstanding properties of acrylic polymers and copolymers have long been recognized, and advantage is being taken of them in many fields. Products already benefitting from these properties include protective coatings, leather and textile finishes, sizing for nylon, adhesives, synthetic rubber, lubricating oil additives, water paints, and soil conditioners, as well as the Rohm & Haas acrylic plastic, PLEXIGLAS*.

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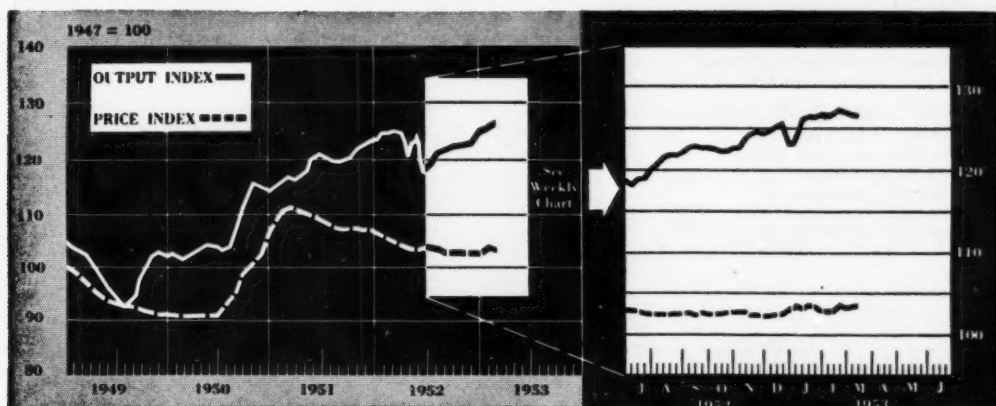
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MARKETS



CW Index of Chemical Output—Basis: Total Man Hours Worked in Selected Chemical Industries
CW Price Index—Basis: Weekly Prices of Sixteen Selected Chemicals

MARKET LETTER

Coal-tar chemicals continue to feel the nudge toward higher prices. By this week most producers are quoting the newly-upped 36-42¢/gal. tags (depending on shipping points). And there's a big question whether or not schedules will level out at that range.

Prime reason, of course, is the pressure of consumer demand that still has producers selling the material as fast as it's made.

That demand, as expected, has spilled over into the petro field. Here prices for petroleum benzol are officially pegged in the 55-60¢/gal. range, but there's no guarantee that the traditional differential between it and coal-tar benzol schedules will be allowed to narrow any further.

Trichlorobenzene users will shell out 2¢/lb. more come the first of May. At least one producer is quoting the following prices: 14½¢/lb., c.l.; 15½¢, l.c.l.; 13¢, in tanks.

The increase is directly attributed to higher cost benzol.

Some toluol users—limping along on curtailed producers' allotments—are also paying higher prices this week for the critically short aromatic. One major producer has upped small-lot prices as much as 3-5¢/gal. in a move designed to offset high trucking costs.

A 1½¢/gal. boost in tankcar schedules by the same producer may be a bellwether for other toluol makers, but at the moment indications are that most will hold off any hike announcement so soon after the benzol increases.

Always a good criterion of a chemical's availability—or lack of it—is the resellers' price. In the spot market toluol is going for a good 16-19¢/gal. over manufacturers' prices—when available, that is.

With lead supply and demand, reportedly pretty much in balance, some observers are seeing a "temporary" label on last week's ½¢/lb. cut. The decrease—due principally to continuing softness in the London metal market—may well be cancelled out by relatively strong domestic inquiries.

However, the optimism seems to be directly contradicted by the almost immediate reaction the lower (13¢/lb.) lead price is having on pigment price tags.

MARKET LETTER

WEEKLY BUSINESS INDICATORS

	Latest Week	Preceding Week	Year Ago
CHEMICAL WEEK Output Index (1947=100)	126.6	126.8	125.4
CHEMICAL WEEK Wholesale Price Index (1947=100)	104.6	104.3	103.4
Bituminous Coal Production (daily average, 1,000 tons)	1,334.0	1,376.0	1,535.0
Steel Ingot Production (1,000 tons)	2,180.0	2,230.0	2,038.0
Stock Price Index of 14 Chemical Companies (Standard & Poor's Corp.)	252.1	256.2	232.7

MONTHLY INDICATORS—Production (Index 1947-49=100)

	Latest Month	Preceding Month	Year Ago
All Manufacturing and Mining	241	239	221
Durable Manufactures	327	322	285
Non-durable Manufactures	198	195	190
All Chemical Products	306	310	297
Industrial Chemicals	590	597	5622
Petroleum and Coal Products	288	291	281

In another chemical process industry market, an oversupply of linseed oil has the U.S. Dept. of Agriculture advising farmers to revise their flaxseed planting plans.

Inducement to cut plantings 10-15% instead of following through with a planned 20% increase: farmers can realize a better price for existing linseed oil supplies by simply cutting this year's output.

Sound reasoning behind USDA urging: Commercial Credit Corp. and commercial stocks will likely hit a year's supply by July 1. CCC alone now holds some 485 million lbs. of linseed oil.

Sidelight on another Washington agency's activity: insiders hear RFC officials were not too unhappy that ethyl alcohol producers offered only 16.4 million gal. of low-priced material against the 20 million it sought for the second quarter rubber program.

Talk is that the original estimate (up to 80 million gal. of the government's alcohol needs for the synthetic rubber plants is a mite high. The steeper quotations submitted by most producers presented RFC with a sigh-relieving out to forego picking up almost 3.5 million gal.

Many chemical makers heaved sighs of relief when controls were junked, and weekly more and more are cracking through the old profit-pruning ceilings. One major oxalic acid producer last Friday eased prices upward $\frac{3}{4}$ -1¢/lb.

It's a cinch other oxalic makers—also chafing under additional raw materials, labor, freight costs—have passed the front-office-price-discussion stage, will notify customers about similar hikes from the current 15 $\frac{3}{4}$ ¢/lb. (c.l.), 17¢ (l.c.l.) schedules.

By this week most muriate of potash users are being handed 1953-54 season price schedules. Prices remain substantially unchanged. Trona (Calif.) contract price muriate 60-62% K₂O is pegged at 53¢/unit of K₂O in bulk, c.l.; at Carlsbad (N.M.), the price per K₂O unit is hovering around the 43¢-mark.

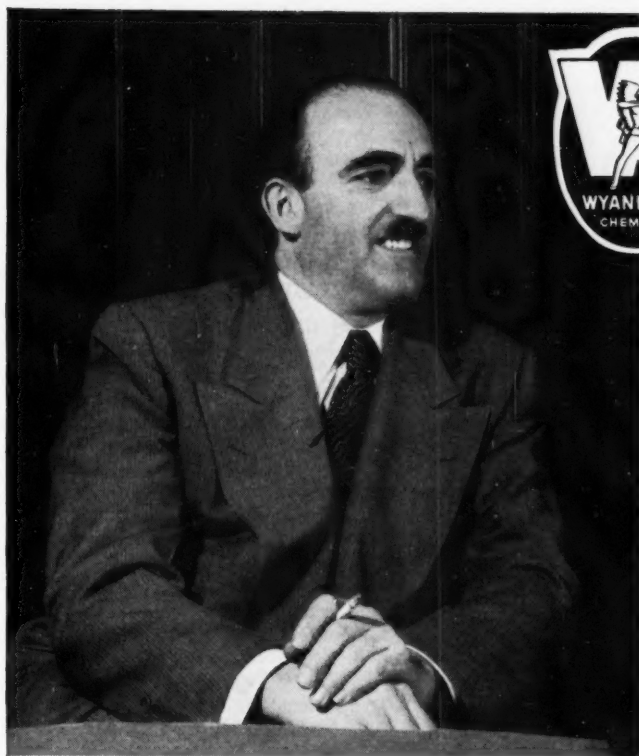
Despite strong domestic demands that have potash producers chalking up new shipping records, don't look for any shortage—now or next year. Reason: production, now at capacity, will be hiked by new facilities coming in.

SELECTED CHEMICAL MARKET PRICE CHANGES—Week Ending April 13, 1953

UP

	Change	New Price		Change	New Price
Trichlorobenzene, drms., c.l., wks.	\$.02	\$.145	Sodium formate, bgs., c.l., dlvd., E.,		
Oxalic acid, bbls., c.l., wks.	.0075	.165	100 lbs.	\$.50	\$7.60
			Furfural, tech., tks., wks.	.007	.115

All prices per pound unless quantity is stated.



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FOR INDUSTRY: A reopened nine-million-gallon/year market.

USN Paint Makers Bow Out

Possibility that the U.S. Navy will step out of the paint manufacturing field (CW Market Letter, Apr. 4), will not alter in the least the monotonous paint-applying, paint-chipping chores of the Fleet's boots, but some civilian paint makers are looking forward to a boost in their sales.

Headed for a complete shutdown, or at least drastic curtailment of activities, are the Navy's two major paint plants at Mare Island, Calif., and Norfolk, Va. Combined output of the installations reportedly tops six million gallons of all types of paint and enamel at a total cost of nearly \$15 million/year.

That six million gallons—which amounts to about two-thirds of the Navy's yearly requirements—may be just a slight plop in the nation's more than 1,300 manufacturers' paint production bucket, but industry will be interested if only to prove that the government's special paint specifications can be met by civilian makers.

Posers and Price Tags: Originally, the Navy moved into the paint manufacturing field because it was dissatisfied with some special "antifouling" paints private industry had turned out for it. There were other reasons, too, why the admirals decided to shun civilian material, manufacture its own paints and enamels. For instance, it was claimed that the Navy Department could maintain a better check on quality and "specification modification" if it made rather than bought paints it needed.

Then, too, the problem of uniformity of paint shades kept cropping up, especially when contracts for paints

were awarded to two or more firms. Control of shades within given specification is important on at least two counts—for camouflage and for uniformity of appearance.

But the price tag for the privilege of making its own paint comes high; in fact the Navy is first to admit it costs more to produce what it needs than it costs to buy in the market.

Examples: for the widely used Type A white general-purpose paint, the Navy shells out about \$2.75/gal.; in the enamel department a certain type of general-purpose semigloss nicks the taxpayers about \$2/gal. Although it's difficult to pinpoint comparable prices that will be offered, industry consensus clearly indicates it can "do better" than the Navy figures—in most cases.

There's no doubt that the current Republican economy wind blowing through Washington is a big factor in Secretary of the Navy Robert B. Anderson's decision to take the Navy out of the paint business, but it was a special industry task group that fanned the first breeze. The National Security Industrial Assn., a group of companies dealing with the Defense Department, was asked to study Navy paint operations, recommend a course of action to the Secretary.

Meanwhile, the Navy told a House Subcommittee it would abide by the recommendations. The report, which was laid on the Secretary's desk last Jan. 13, concluded with the flat assertion that the sea arm should hie itself out of the paint-making business. Big reason: it's uneconomical.

However, not all paint production

operations will grind to a halt. There are certain special and secret formulas that will not—for security and other reasons—be purchased from civilians. The Navy, though, will soon be shopping around for all its regular enamel and other standard-type paints. And that's a nine-million-gallon/year market heretofore closed to private paint manufacturers.

Cheaper Urea

With a spate of plants being built or planned to satisfy the upsurging demand, CW this week invited two experts to air their considered views on fertilizer urea—Henry Wessel, engineering economic head, and William Niven, Jr., chemical engineering division chairman, of the Midwest Research Inst. in Kansas City, Mo.

Wessel and Niven have just completed an economic study of urea. Right off the reel, they pointed out that the tremendous growth in consumption of synthetic nitrogen carriers for fertilizer stems from the close of World War II, when the government-built plants were turned over to peacetime operation.

Farmer acceptance, spurred on by impressive yield increases, has kept demand for nitrogen carriers ahead of production capacity. And following a definite fertilizer industry trend toward more concentrated forms of plant nutrients, ever more attention is being paid to urea as a high-analysis (42%) nitrogen carrier.

Early Start: Urea was one of the earlier synthetic nitrogen carriers for fertilizers in this country. The process mother liquors (UAL liquors) were probably sold to fertilizer mixers from about 1933, when Du Pont's Belle, Va., plant began urea production.

A little later, about 1937-'38, Du Pont offered a solid urea fertilizer, Uramon; and this has sold up to 30,-

TABLE I
COST OF NITROGEN CARRIERS

Dollars Per 20 lb. of Contained Nitrogen

Anhydrous ammonia (at \$80/ton)	0.97
Ammonia liquors	0.912—1.046
Urea ammonia liquor	1.185
Ammonium nitrate (at \$67/ton)	1.92
Ammonium sulfate	1.945—2.543
Sodium nitrate	2.968
Cyanamide	3.03
Urea (at \$142/ton)	3.087



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Benzol	Pyridines
Toluol	Picolines
Xylol	Quinoline
Naphthalene	Lutidines
Hi-Flash Solvent	Tar Acid Oils
Phthalic Anhydride	Neutral Coal-Tar Oils
Dibutyl Phthalate	Coal-Tar Creosote
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MARKETS.

TABLE II
ROUGH ESTIMATED PRODUCTION COST
(values in dollars per ton of product)
Capacity 100 Tons of Contained Nitrogen Per Day

	Ammonium Nitrate ¹	Urea ⁴
Capacity, tons of product per day	285	215
Capacity, tons of product per year	94,000	71,000
Plant investment, per ton of annual capacity at 90% onstream time	\$45 ²	\$35-\$60 ^{2, 3}
I. Raw material and utilities		
Ammonia at \$80/ton	35	48
Coating material	0.5	0.5
Steam, water, gas-engine fuel	1.0	3
Power	0.3	2.2
II. Operating and maintenance labor and materials	6	6.2
III. Bags	4	4 ¹
IV. Indirect costs		
Total of depreciation, interest, insurance, taxes, at 12%	5.4	7.2 ¹
Total per ton of product	\$52.2	\$71.1
Total per ton of contained nitrogen	\$149	\$155

¹ Wessel's and Niven's estimate

² Exclusive of ammonia facilities

³ It is believed that at least \$60 per ton of annual capacity is required; \$60 was used for indirect costs and for Table III.

⁴ According to Roseboom, capacities over 100 tons/day of urea require duplication of equipment and will not materially influence the economics of investment and plant operation. Wessel and Niven believe this point debatable but have used Roseboom's figures in the comparison.

000 to 40,000 tons/year ever since. However, when ammonium nitrate was offered in quantity at the end of World War II, it soon overshadowed other nitrogen carriers, primarily because of its price advantage.

It was assumed during the early years that the Du Pont process had not and would not completely overcome the corrosion and low-yield problems inherited from the German urea plants. Under such conditions,

manufacturing cost improvement to the point of competition with ammonium nitrate seemed unattainable.

But in 1950, Solvay entered the field as a second U.S. producer. Interest in fertilizer urea perked up. Development of the Pechiney process has since occupied several present and prospective ammonia producers. The manufacturing cost data of Roseboom (*Chemical Engineering*, Mar. '51) show that the cost of Pechi-

TABLE III
ESTIMATED RETURN ON UREA INVESTMENT

(Basis: Capacity of 100 tons of contained nitrogen per day)

Estimated selling price, per ton of product—	\$100
per ton of nitrogen—	215
Price, 100% nitrogen basis	242
Annual sales (71,000 tons)—	7,100,000
Manufacturing cost, at \$71.10 (from Table II)—	\$5,050,000
Selling and administrative costs, at 10%—	505,000
Net profit before taxes—	\$1,545,000
Net profit after 60% taxes—	620,000
Fixed capital—	\$4,200,000
Working capital, at 20% of annual sales	\$1,400,000
Net return on capital investment	11%



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MARKETS.

ney-process urea can approach that of ammonium nitrate.

Competition between the two chemicals now seems to be further confirmed: at least three ammonia-urea plants are to be built—one by W. R. Grace, another by Allied Chemical and a third by Deere. Several others are thinking it over.

At What Price? The current prices for nitrogen carriers (Table I) show urea far out of line, but largely reflect the spot market situation with fertilizer urea at \$142/ton. The 46%, C.P., or commercial grade, was quoted at \$110 at the same time the 42% fertilizer grade sold at \$134.

Although the fertilizer grade is "conditioned," the added cost of treatment (Wessel and Niven maintain) certainly does not match the price increase. On a nitrogen basis alone, therefore, \$110/ton is closer to the correct figure for comparison with ammonium nitrate.

For a rough production cost (Table II), Wessel and Niven cited Roosevelt's data. These show a 10% return on urea selling at a price close to that of ammonium nitrate, when compared on a contained-nitrogen basis (Table III).

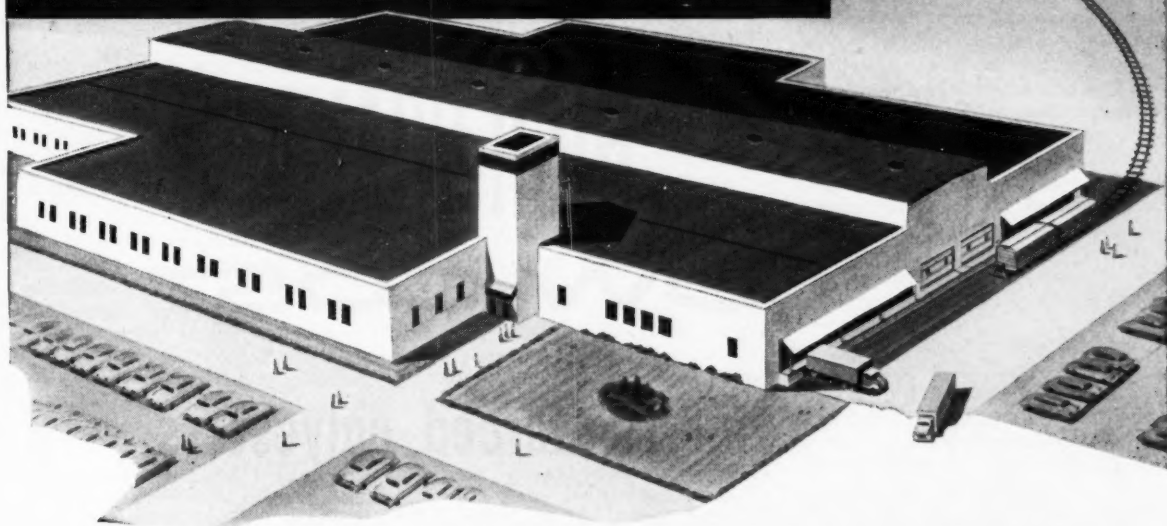
Good Customers: The corn belt and wheat states are just beginning to realize that their soils are losing nitrogen faster than standard crop-rotational practices are replacing it. This rude awakening and various other factors, such as "grassland farming," add up to a huge nitrogen carrier potential. Biggest jump in demand is slated for the Northern Plains States, where the 1955-over-1950 rise is estimated at 320%.

Considerable speculation has arisen as to the market acceptance of fertilizer urea, particularly if offered for direct application rather than as a component of mixed fertilizer. Since urea is fairly hygroscopic, it must be granulated with a conditioner. However, more acceptable physical forms are being developed; an operation similar to the prilling of ammonium nitrate has been found to be successful for urea.

Brighter Future: Winding it all up, Wessel and Niven feel that the greatest deterrents to the more extensive use of urea as a fertilizer have been the factors of price and availability rather than consumer acceptance.

With continued process improvements and increased production know-how, urea should soon be on a competitive basis with ammonium nitrate, pricewise. And with new capacity coming in, the path ahead looks brighter than ever before.

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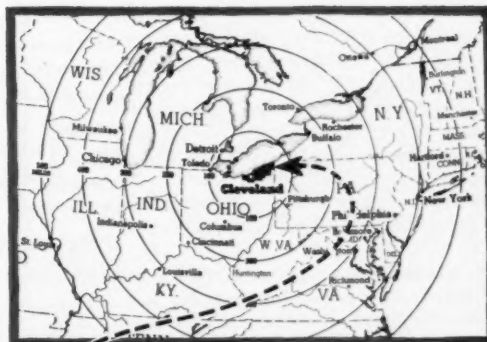
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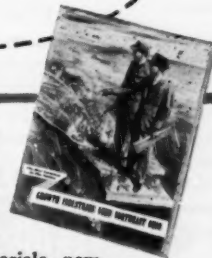
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Neoprene surface coatings, supplied with mixed-in hardeners, add new application ease to an old standby in corrosion protection.

Latest with a simplified neoprene system is Pennsalt, with a tough maintenance paint, joining fast-expanding Gates Engineering and Union Bay State Chemical.

They're shooting for a market pegged at \$20 million or more—and that's a conservative guess that military needs can boost.

Not a pleasure to apply—but relatively inexpensive and simple to use. Those are the advantages behind the swelling demand for neoprene maintenance coatings with "built-in" accelerators. Neoprene has a hard-to-match record for heavy-duty corrosion protection, and the new ready-to-spread coatings are broadening uses of the old standby.

Latest to come out with a ready-mixed neoprene paint is Pennsylvania Salt Co. (Philadelphia), which last month started shipping its Neocoat formulations for protective painting in plants. Pennsalt thus joins Gates Engineering Co. (New Castle, Del.) and Union Bay State Chemical Co. (Cambridge, Mass.) as leading proponents of the simplified coatings. (A host of firms are making various types of neoprene paints and coatings.)

And the sales game is worth bagging—estimated at \$20-30 million/year for the special heavy-duty jobs requiring the neoprene skin. And though maintenance painting is the prime outlet, the durable paints are finding plenty of other uses, not the least of which are in rugged military applications.

Savings the Sell: The pitch in promoting these one-part systems for maintenance is that the simplified coatings produce the most durable films in the most economical fashion. And durability of the films is claimed to match or surpass that of straight neoprene—the paints are said to stand up to nitric acid fumes better than plain neoprene sheeting.

Besides the corrosion resistance of the films, there is the added plus of simple application—three coats including primer are said to do the trick in the most severe cases. The film has excellent heat resistance, as well as the ability to withstand as broad a band of corrosive chemicals as nearly any coating commercially available.

Chloroprene Plus: Like any manufacturer who has latched onto a good

thing, makers of the ready-to-go neoprene paints are a little vague about actual composition of their products. But it seems pretty clear that the straight neoprene has been fortified with some other resins.

Application and action are outlined sketchily: the paint is brushed or sprayed on just as it comes from the can. As formulated, both a hardener (of the general nature of phenol-formaldehyde) and a retardant are incorporated. As the solvent (ordinary aromatics like xylene, etc., will do) evaporates, it removes the retardant, and the film is polymerized right on the surface.

The use of a mixed-in accelerator has one major drawback—a loss in stability, or a shortened shelf life. That has been the reason, a number of producers of neoprene maintenance paints have declared, that they prefer to stick to selling the paint and accelerator separately. It's their contention that the five minutes or so required to mix in a little accelerator should not disturb maintenance engineers.

Five-Mil. Film: It has been fairly well established in a number of studies* that the minimum film thickness suitable for economical maintenance protection is five mils. The simplified systems currently available are designed to give a five-mil. skin in three coats, including the primer coat. (Investigations show that each additional coat hikes painting cost 17%, with no compensating increase in service life.)

The primer coat is generally a chlorinated rubber, or chlorinated hydrocarbon type. In some cases, plant maintenance engineers prefer to skip the primer coat, apply three coats of the one-part paint. With its new Neocoat system, Pennsalt is offering two primers, Neoprime A for all surfaces except concrete, and Neoprime B for concrete surfaces.

The ready-to-spread neoprenes are fast drying, a point that helps them sell in busy plants. Under ordinary conditions, a coat will dry in about an hour—the three coats can be put on in less than half a day, cutting shut-down time.

As nearly all makers of protective coating emphasize, surface preparation is often half the cost of maintenance painting. But once a well-applied coating is on, frequent inspection and touching up can materially drop the cost of maintaining a five-mil. coat. Pennsalt estimates that with its product (these paints average about \$8-9/gal.), a durable coat can be applied for roughly 36-37¢/sq. ft.; careful inspection and touching up will keep the surface in shape for as low as 6¢/sq. ft.

Demand Dandy: The simplified-system neoprene paints have been on the market for about two years. Gates was probably the first to offer them; Union Bay State Chemical has had its 300 Series of coatings available for about a year and a half.

The products seem to have caught on quickly. Gates is currently in the process of more than tripling facilities for manufacture and application of its coatings, is moving from Wilmington to New Castle, Del.

And makers of other neoprene coatings aren't loafing, either. Sheet- and mastic forms of neoprene are widely used industrially for lining process equipment. The paints are often employed even here—instead of the three coats suggested for maintenance work, 18-20 are sprayed on to for a hide better than 1/8 in. thick. Both latex emulsion and solvent forms of neoprene are used in these applications.

It's clear that the small portion of the giant (estimated at \$2 billion) market for protective coating materials that requires heavy-duty products like the neoprenes, will be strongly fought for. And three manufacturers are betting that convenience is the factor that will swing purchases to their ready-to-spread paints.

Chek, Chek and Check

Aerosol application is the latest canny tactic in dye penetrant inspection systems. Magnaflux Corp. (Chicago) has put up its Spotcheck in the pressurized units, is putting the pressure on competitors—Turco Product's Dy-Chek and Met-L-Chek's Met-L-Chek.

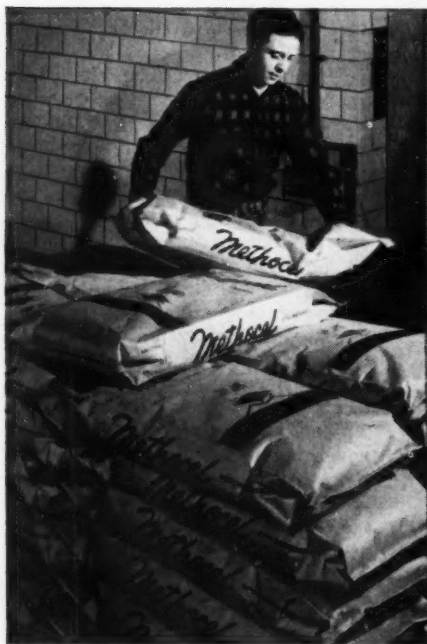
And pressure in the business—estimated to have a potential of at least \$1½-2 million/year—has been pretty

* Chemical Engineering, May, Dec. '52.



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high all along. Right now, Turco (Los Angeles) has the biggest hunk of the sales (moves 300,000 gal. a year); Met-L-Chek (Los Angeles) sells about a quarter of that, and Magnaflux is just getting into volume sales. One other domestic brand, Colortest, made by K&W Products (Whittier, Calif.), is now available, along with a couple of European products.

Generally speaking, the processes



FINDING FLAWS: Uncovering new markets for dye penetrant inspection.

are just getting firmly footed in the aircraft field, although they were originally developed (by Loy Sockman, then with Northrop, now president of Met-L-Chek) for inspection of plane parts. Ruling that the system (Dy-Chek was first in production) was toxic to users, the Air Force originally turned thumbs down—and stymied the process there. But it granted an o.k. late last year that once more opened up things. All the airlines are using one product or another now, and airframe manufacturers are expected to be big consumers.

Test All: The dye penetrants are said to be the only means of finding surface defects in nonmagnetic metals such as copper, brass, magnesium, aluminum and titanium, as well as in ceramics and plastics. Iron and steel can be adequately examined by magnetic inspection processes—but the

dye penetrants are giving competition here, too. Magnetic processes require expensive equipment and don't determine whether or not a defect is surface or sub-surface. The dyes demand no particular equipment, bring out only surface flaws.

Dy-Chek and Met-L-Chek are both mixtures of ethers (Spotcheck is said to be a light petroleum oil) with a red coal-tar dye and low-viscosity inert diluents. This is sprayed, brushed or dipped on, allowed to soak into cracks and pores. Excess is wiped off, then a developer (an alcohol) is applied to draw the dye back to the surface. Defects are brought out in about seven to eight minutes.

For some time, Magnaflux has offered its similar Zyglo system, which makes use of a dye that fluoresces under ultraviolet light. Drawbacks appear to be slower development time—about 30 minutes—and requirement for an ultraviolet light source. Zyglo dye has a considerable price advantage, however: \$2.80/gal. compared with \$15-\$25.

Price War: The aerosol form of Spotcheck is part of a new inspection kit Magnaflux is retailing for \$35. Major outlet for the dye penetrants, however, is in plant inspection—introduction of Spotcheck caused Met-L-Chek to drop prices for dye (from \$25/gal. down to \$15) and developer (\$12.50 to \$9) to meet the competition, although Dy-Chek has remained steady.

A little of the dye goes a long way; a gallon is claimed to cover more than 3,000 sq. ft. One railroad, using the system for inspection of its overhauled diesels, gets by on about three gal./month, although it uses the dip method of application rather than swab application.

Right now, the railroads, trucking companies, and oil companies (for field inspection of pipe lines and tank liners) are top consumers of the dyes. General industry and airlines are just catching on to use of them.

Makers are looking ahead to the automotive field for a major market. They're trying to sell garages on the idea of penetrants for front-end checks—axles, steering gear. The dye penetrants produces something that a customer can readily see. Already some auto assembly plants use the dyes, but they have still to get going in the field as a whole.

It's plain that Magnaflux, which has long offered competitive inspection processes, hasn't been welcomed into the field by Dy-Chek and Met-L-Chek makers. It's also plain that, welcome or not, Magnaflux will live the battle for the inspection dollar.

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Problem Pair

The so-called Fair Trade laws, and their arch-foe, supermarket John Schwegmann, manage to keep in the news. Latest move is Schwegmann's brief attacking the constitutionality of the laws, filed in the Fifth Circuit Court of Appeals in New Orleans.

The brief is part of Schwegmann's appeal from a recent ruling by Federal Judge J. Skelly Wright. Wright granted an injunction to Eli Lilly and Co. stopping Schwegmann from selling Lilly pharmaceuticals at lower than fixed prices.

Oral arguments on the appeal are slated to start next week (April 20); the brief as submitted by Schwegmann's lawyers is the first major move the New Orleans supermarket has made since the recent ruling against him. Main contentions of the brief:

- Fair-trade price-fixing is an unconstitutional delegation of a legislative function.

- It is a violation of the due process clause.

- It violates the commerce clause of the constitution.

- It contains self-defeating contradictions in terms.

Attorneys for Lilly have also filed a brief for the April 20 hearings. They



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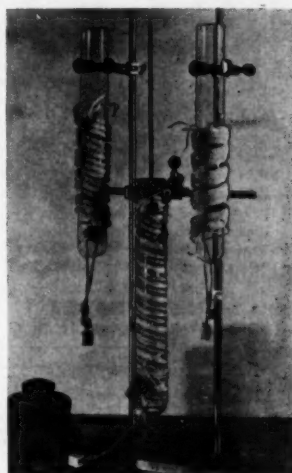
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SPECIALTIES

declare that the appeals court would have to upset a long line of decisions by the U. S. Supreme Court in order to reverse Wright's ruling. It referred to Schwegmann's appeal as "extravagant claims of jeopardy to the American way of life."

National Contention: Though fair trade is spotlighted in New Orleans, where attention has been drawn to the colorful Schwegmann, it's been in the news elsewhere.

Industry lawyers point out that the court decision that undermined fair trade in Georgia (CW, Mar. 28), if duplicated elsewhere, could weaken effectiveness of the McGuire Act in compelling compliance with fair trade agreements by nonsigners.

Although the Georgia ruling might have been encouraging to Schwegmann, he continues to face court trouble. Judge Wright recently granted Bristol-Myers a preliminary injunction preventing Schwegmann from price-cutting on B-M products. Schwegmann, in turn, claims \$2,073.93 damages against the company under the Sherman Antitrust Act. It's a claim for triple damages, because Schwegmann declares the pharmaceutical firm refused to pay him certain advertising allowances.

Liquid Krilium: Five dollars to treat an acre—that's the estimated cost to prevent soil crusting with a new liquid form of Krilium. Monsanto points out, however, that treatment refers to row application and surface treatment only.

The new Krilium formulation, composition of which is unrevealed, retails at \$7.50/gal. in single gallons; in 55-gal. drum, cost drops to \$5/gal. It supplements the dry Merloam and Loamaker formulations, which are still being marketed.

Ordinary spray equipment is used to produce the "band" or crop-row applications, which permits use of as little as ½ gal./acre of the conditioner with cotton planted with 40-in. row spacing. The material, after dilution with water, should be applied only to fully worked soil.

Plant Miniature: Opposite its main plant in Camden, N.J., R. M. Hollingshead is building a \$150,000 pilot plant for test runs of new Hollingshead specialties.

Moths Can't Play: Another aerosol specialty has just been introduced in Chicago, by Sager Chemical Products Co. (Broadview, Ill.). Called Cedarize Spray, it's composed of cedar oil (33%), acrylic resin (33%), and xylol

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SPECIALTIES.

(33%), is offered as a mothproof for closets and storage chests. The 12-oz. aerosol unit, sold for \$1.95, is said to cover 150 sq. ft. with a clear lacquer, is claimed to be effective for months.

And 101 Colors: Utilizing a new blow-extrusion process, General Tire & Rubber Co.'s Plastics Div. is producing a new polyvinyl chloride film. Tabbed X-V, it is offered to makers of raincoats, container liners, and the like, is available in gages .001 to .004, and 101 different colors.

Burn Bomb: An aerosol containing a pain-killing burn treatment has been included in the first-aid kits put out by Davis Emergency Equipment Co. The unit dispenses Americaine—20% Benzocaine in a special solvent.

Ag Chemical Bill: Under consideration in the House of Representatives is H. R. 4277, a bill introduced by Rep. A. L. Miller (R., Neb.) dealing with insecticides, fungicides, and other agricultural chemicals.

Designed to cover much the same ground as the previously introduced Delaney Bill, H. R. 4277 is receiving considerably more support from agricultural chemical makers than the proposed Delaney amendments to the Food, Drug and Cosmetic Act. Lea Hitchner, executive secretary of the National Agricultural Chemicals Assn., brought out several points of the new bill:

- Before a poisonous pesticide can be used on a food to be sold in interstate commerce, the manufacturer must prove to the satisfaction of the Federal Security Administrator the safety of the pesticide for the use intended.

- In addition, the product must be registered by the Secretary of Agriculture as provided by the Insecticide, Fungicide and Rodenticide Act.

The Miller bill would also separate pesticides from chemicals used in processing of foods.

Cortisone Duo: Cortone, Merck & Co.'s brand of cortisone, has been combined with the antibiotic bacitracin to make the new Ophthalmic Ointment of Cortone Acetate with Bacitracin, suggested for infections of the eye where cortisone can control the inflammatory and exudative phases of the disease, and where bacitracin can control the infection. The ointment is supplied in 3.5-gram tubes containing 15 mg. cortisone acetate and 1,000 units of bacitracin per gram in a petrolatum base; the product is sold only on prescription.

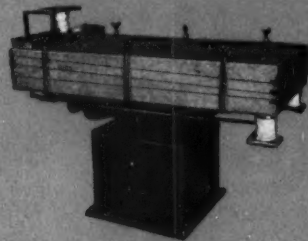
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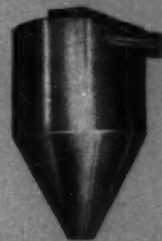
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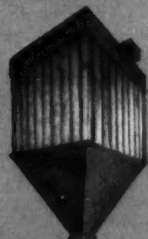
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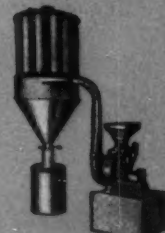
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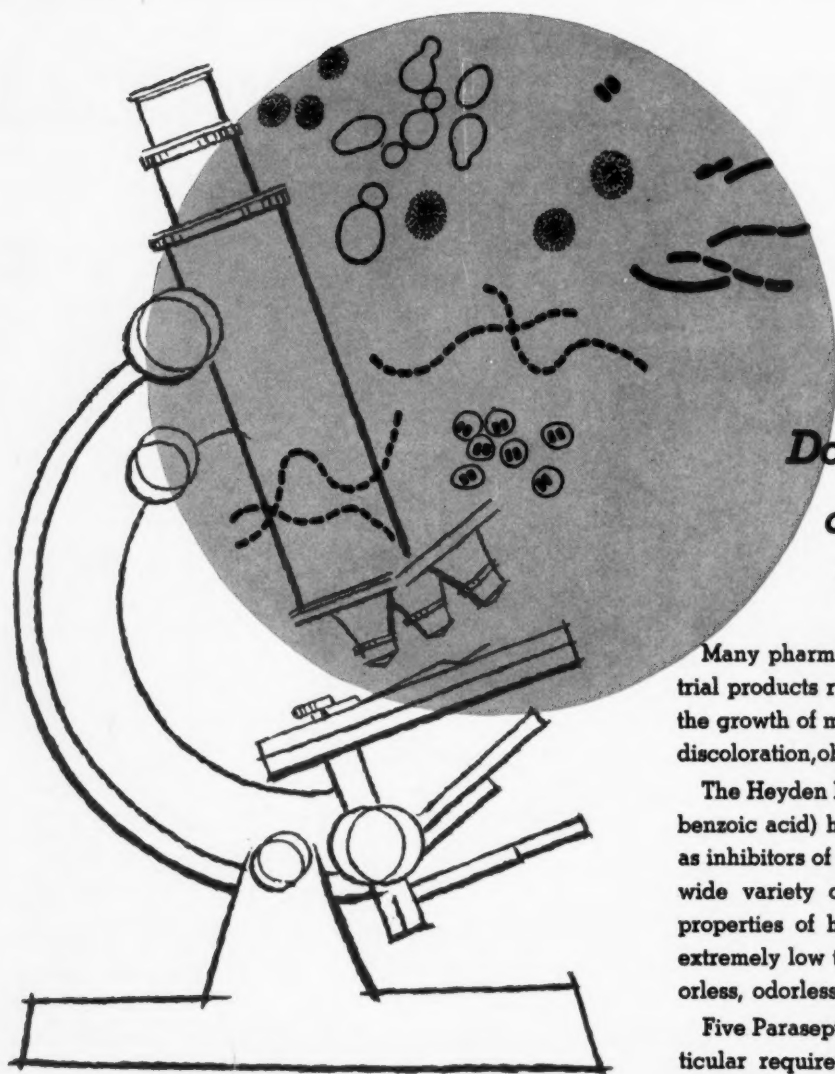
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